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E-Therapy for Substance Abuse and Co-Morbidity

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Preface

Understanding barriers that prevent individuals from seeking necessary mental health treatment is at the center of the development and analysis of practice models of care. Geographic location, transportation, language barriers, and other situations contribute to difficulties in obtaining adequate treatment for mental illness. Patient engagement is crucial to the helping process as the client must become motivated to seek help. Research explains, however, that not only must the individual be motivated but that the treatment model must fit the client, including coinciding with the client's life situations and circumstances (Zanjani et al. 2010). Clinicians may continue to struggle with the difficulties of catering treatment models to individuals, but research suggests that new treatment models using electronic strategies (e.g., telemedicine and technologically advanced referral systems) may change the face of mental health services. Collaborative care as well as innovative models of treatment, including telemedicine and telepsychiatry, have shown promise for eliminating barriers to mental health treatment (Meyer et al. 2009). Telemedicine, with regard to mental health services, is the process in which counseling or mental health services are transmitted through audio or audiovisually. Data exist to indicate that telemedicine has been utilized to spur beneficial mental health outcomes in various populations.

Rural nursing home residents are among the most underserved populations for mental health services due to the lack of access to these services (Rabinowitz et al. 2010). Studies indicate that rural nursing home residents have benefited from the use of telemedicine. Understanding and meeting the mental health needs of these residents is a challenge because the primary care physician, who may have little mental health training, is generally providing all services in rural settings (Smyer et al. 1994). Elderly patients have shown positive responses to telemedicine, specifically when it is introduced gradually. Patients were pleased with the quick response team and availability of telepsychiatrists and also impressed with the "high-tech" quality of the experience (Rabinowitz et al. 2010). While studies have not currently suggested that telemedicine psychiatric counseling services are comparable to traditional face-to-face services, these studies suggest that elderly individuals respond well to telemedicine. Continued research and adaptation of treatment models to patient needs is essential, especially when working with rural elderly populations.

Additional treatment interventions, including referral management interventions, have also been effective in increasing treatment participation among clients. In a randomized control trial with a sample of adult male veterans, telemedicine and technologically advanced referral systems were used to increase therapeutic outcomes. A holistic approach was used that focused on all aspects of the participant's treatment, with specific focus on each participant's symptoms (Zanjani et al. 2010).

An overall increase in mental health functioning as well as an overall decrease in depressive symptoms and binge rates were observed over time (Zanjani et al. 2010). The telephone-based referral care management (TBR-CM) that was employed in the clinical trial also increased attendance for appointments (Zanjani et al. 2010). One of the benefits of the TBR-CM model is that it can be changed and altered to meet the needs of individuals across diagnostic and age groups.

Telemedicine models have not only been used for the men and women returning to the USA from combat, but also is being used to support psychic–prophylactic interventions (Kostiuk et al. 2009). Tools that can be used to increase client engagement must continue to be incorporated when working with adult male veterans or men and women currently serving, but further study is needed to truly understand the therapeutic and psychiatric benefits of telemedicine.

According to the American Academy of Child and Adolescent Psychiatry (2010), between 7 and 12 million youths suffer from mental, behavioral, or developmental disorders. The use of telemedicine with teens has gained support and flourished out of a need to overcome barriers to receiving mental health treatment and a need to deal with the shortage of child specific psychiatrists and social workers (Weingarden Dubin 2010). Because telemedicine allows a client to contact a mental health service provider whether or not the provider is in the office, telemedicine is gaining popularity among teens. As video conferencing and social networking sites become more pervasive in society, telemedicine gains popularity with teens, partially because it reduces the stigma associated with receiving mental health services (Naditz 2010).

Thus it is apparent that the development of telemedicine models that would be effective in helping children and adolescents suffering from mental illness is feasible and can be effective in increasing access to mental healthcare (Myers et al 2010).

It is estimated that 20 % of individuals needing mental service can be helped through telemedicine (SAMHSA 2009). Keeping this in mind, continued research must be conducted to study the potential benefits and drawbacks of telemedicine with the goal of eliminating barriers to seeking mental health treatment.

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Chapter 1
Application of E-Therapy
Programs to Social Work Practice

John S. Wodarski and Jaime Frimpong

Technology is ever changing the way people interact and live. Communication is extensively different now, especially when compared to 10 years ago. Social work professionals need to embrace these changes and see how it can benefit their clients. This is a growing area with promising interventions using technology, although there is a need for more research to determine the effective use of these techniques (Postel et al. 2007).

Research shows that e-therapy has the capacity to reach clients in rural settings (Postel et al. 2010), be cost-effective (Bergstrom et al. 2010), and provide supplemental help to those involved in the mental health system, as well as those who are disenfranchised or part of the minority (Barak and Grohol 2011). Technology can bring complexity as social workers need to adjust the NASW Code of Ethics to be applicable for e-therapy (Santhiveeran 2009), but this should not be the cause for avoidance. Instead, social workers should address these ethical dilemmas and pursue technological advantages for the sake of their clients.

E-therapy contains many different beneficial aspects for the client and the social worker. If transportation to an office is unavailable for the client, e-therapy provides the opportunity to offer therapy over the phone or through e-mail. There are websites helping clients work through their panic disorder or other similar issues using cognitive behavioral therapy (CBT). Social workers are also able to improve their skills through online trainings and gain CEU's by becoming trained in trauma-focused CBT (http://tfcbt.musc.edu/). Trainings for social workers on using

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technology in therapy need to become more accessible to provide knowledge and comfort in using these techniques. Social workers need to pursue the use of technology, allowing them to meet clients where they are.

The use of Technology

The use of technology continues to grow and develop rapidly. The need for social workers to incorporate this wealth of aid is vital, as nearly 70 % of Americans and Western Europeans had access to the Internet in 2007 (Postel et al. 2010; Lovejoy et al. 2009) and around 50 % of the population had access to high-speed Internet (Lovejoy et al. 2009). In 2009, researchers found that 35 % of American adults used the Internet at least once daily and over 60 million adults used the Internet to obtain help in dealing with difficult life decisions (Rogers et al. 2009). The use of the Internet is increasing as people are using it to acquire needed information and are using e-mail as one of their primary means of communication (Ishizuki and Cotter 2009).

The use of technology is growing in younger generations. A study in 2009 discovered that 84 % of adults aged between 18 and 28 years accessed the Internet for various reasons including school, social networking, and work. Seventy-three percent of these young adults used the Internet to research items regarding their health care (Rogers et al. 2009). The e-therapy is highly useful for younger generations (Barak et al. 2008). The increased computer access and Internet consumption through desktops, laptops, and cell phones is not just among clients; social workers are progressively utilizing technology to assist their clients. In a Virginia study, researchers discovered that almost 99 % of the social workers had access to the Internet and many were employing technology to communicate with clients or conduct work-related research. Of the social workers who used the Internet to help their clients, most described the tool as either somewhat helpful or very helpful. Social workers who used the Internet were planning to increase their use to help their clients in the future (Ishizuki and Cotter 2009).

There are more than 300 professional Internet sites providing therapeutic services and over 500 individual Internet therapists offering private pay services (Rogers et al. 2009). Internet access is extremely important in areas where therapy or contact with a social worker is not easily obtained. For people living in remote and rural areas, attending therapy could involve driving excessive distances (Postel et al. 2010; Blankers et al. 2011). Some people are deterred from receiving help due to the stigma of their mental illness (Farvolden et al. 2009). In these cases, the scope of a social worker's ability to provide assistance is limited. This is evident, as nearly two-third of people with diagnosable mental health disorders do not seek the treatment they need (Barak and Grohol 2011). By utilizing therapy on the phone, through e-mail, or a website, access to help could become a reality for these individuals.

While some researchers advocate that e-therapy should only be used as a supplemental tool (Castelnuovo et al. 2003), others see it as a solution for those who have limited access to help (Blankers et al. 2011). The benefits of receiving treatment when it was not previously an option seems to outweigh the limitations researchers

have discovered. As technology increases, the ability of social workers to help the
masses will also grow.

Cost Effectiveness

America spends over US$ 150 billion on morbidity, morality, social and psychoso-
cial problems, violence, criminal behavior, and accidents stemming from disorders
such as alcoholism, drug abuse, depression, anxiety disorders, and eating disorders
(Postel et al. 2007). E-therapy can lower this cost for communities, agencies, and
clients. Bergstrom et al. (2010) discovered that Internet CBT is more cost-effective
than individual CBT because it takes less of the clinician's time. They found Inter-
net CBT to be as cost-effective as group therapy, even surpassing group therapy in
the relation of reduction of the therapist's time.

E-therapy reduces costs for agencies that often require their social workers to
travel to assist clients such as older adults, people with physical disabilities, and
prison populations (Lovejoy et al. 2009; Dorstyn et al. 2011). Social workers deal-
ing with these populations or working in rural areas would have reduced amount
of time and money spent on travel if e-therapy was utilized. This is cost-effective
for the agency and client by limiting travel and reducing the number of in-person
appointments (Lovejoy et al. 2009).

E-therapy can be an option for clients who could not normally afford treatment
as programs such as Internet-based self-help can be offered with moderate to no cost
to the client. This is particularly helpful for clients who would never have received
any help (Blankers et al. 2011). Various websites that teach clients how to imple-
ment therapeutic interventions in their daily life are providing free or budget pricing.

Ethical Considerations

Research needs to boost in the area of maintaining ethical considerations with the
growth of technology. E-therapy is in the beginning stages of development and
much of the ethical considerations are unclear. The NASW Code of Ethics has not
evolved as rapidly as technology, leaving a lack of guidance in the area of e-therapy.
There are social workers who are concerned about protecting their own personal
rights as well as their clients' rights for confidentiality, informed consent, and the
ability to access treatment across state lines. Santhiveeran (2009) discovered that
only half of the websites providing e-therapy furnished information on the social
worker's duty to maintain confidentiality and took steps to ensure that obligation.
These professionals used encrypted e-mail, secure chat, or secure socket layer (SSL)
to safeguard against information being hacked (Santhiveeran 2009).

Confidentiality is one of the chief concerns when using technology to assist a
client. Ishizuki and Cotter (2009) found that confidentiality was identified as the
second main reason that social workers did not use e-mail to help their clients.

Guidelines in the NASW Code of Ethics and future research may circumvent the pitfalls social workers have when using technology. There are ways to ensure confidentiality; social workers just need guidance and assistance as they begin to broach a new way of assisting their clients (Santhiveeran 2009; Barak et al. 2008).

Even as social workers struggle to maintain their client's confidentiality, e-therapy allows clients to access mental health treatment in the privacy of their own home allowing them to receive treatment without fear of being stigmatized (Alcaniz et al. 2003). Marginalized populations have significant reservations about receiving treatment. The confidentiality and privacy of receiving treatment in their homes could override their fear of stigmatization (Barak and Grohol 2011).

Technology to Assist in Mental Health Treatment

Receiving e-therapy is more beneficial than not obtaining any treatment at all and researchers have even identified positive gains of using e-therapy versus traditional treatment methods. Clients who receive help through an asynchronous form, such as e-mail, are able to reread the conversation they had with the therapist. E-therapy also reduces social workers bias because of the lack of interaction through voice and body language (Santhiveeran 2009; Lovejoy et al. 2009). E-mail increases the frequency and amount of contact clients have with clinicians. It also allows them to contact their therapist when they need, causes them to be aware of their behaviors, and helps them remember the vital aspects of their therapy sessions. The removal of therapists from the room gives clients the freedom to express themselves without restriction (Castelnuovo et al. 2003).

There are some proposed limitations to e-therapy, such as difficulties with confidentiality and the lack of proximity of the therapeutic relationship, which can make it difficult to monitor nonverbal behavior (Santhiveeran 2009). Some therapists advocate for the ideal use of e-therapy in collaboration with face-to-face therapy (Barak and Grohol 2011). It is not likely that e-therapy will completely replace face-to-face therapy and become the "gold standard," but it has been found to be a useful supplement or a solution when face-to-face therapy is not accessible (Lovejoy et al. 2009). Clinicians can use e-therapy as an access point for people to start receiving help in person and to compliment help that therapists are already providing. On a population wide scale, social workers now have the ability to introduce prevention of mental health disorders using the Internet. The use of technology can lessen the effects of a full-blown disorder (Barak and Grohol 2011).

Research has discovered similarities in e-therapy and face-to-face therapy. For example, clients were willing to disclose their emotions during Internet therapy sessions as in face-to-face therapy proving that e-therapy is a reasonable option to provide to clients (Rogers et al. 2009). When looking at therapeutic alliance, most clients felt the relationship was equitable in e-therapy as compared to traditional therapy and a few clients even ranked the alliance higher in e-therapy (Lovejoy et al. 2009). Much of the debates regarding Internet therapy are due to lack of training

and education surrounding e-therapy and its benefits. In reality, the therapeutic processes are quite similar to an in-person therapy session. Studies have shown increased satisfaction in e-therapy in the areas of therapeutic alliance and self-disclosure, among other factors (Barak et al 2008).

There are increasingly more ways to assist clientele with e-therapy. Various therapy websites exist that focus on mental health treatment such as *Headworks* at http://headworks.com or *Ask the Internet Therapist* at http://asktheinternettherapist.com. At *Ask the Internet Therapist*, they have several options for minorities to find therapist in their minority group. For example, there was a therapist from Nigeria and another therapist who incorporated therapy for deaf people through doing sign language over a video feed (Barak and Grohol 2011). E-therapy through video technology can also create long distance opportunities that would allow family therapy to occur when a member of the family is in the military (Lovejoy et al. 2009).

Interactive self-guided therapy is another intervention that is set up through a website allowing individuals to interact with a regulated, self-guided software program. It is a self-help program with CBT components and offers interactive exercises for the clients. Self-guided interventions are increasingly useful when assisted with text messages through cell phones or smartphone applications. By employing the use of cell phones, clients can use the interventions wherever they are and throughout their day.

Other sources of assistance provided by technology include online support groups, blogging, and psychoeducational websites. Online support groups provide support in the privacy of the client's own home and allow them to gain support from others with similar issues. Blogging is another beneficial aspect available on the Internet that allows clients to experience catharsis and gain feedback from their peers. Psychoeducational websites such as http://nimh.nih.gov, http://bluepages.anu.edu.au, http://www.mentalhealamerica.org and http://psychcentral.com became more available as researchers discovered the increased use of the Internet as an information source. As technology continues to advance, social workers need to look into more applications from web cameras, smartphone videos, text-based instant messaging, and smartphone applications (Barak and Grohol 2011).

Implications for Anxiety Disorders

E-therapy provides various tools to use in working with mental health issues. The most developed computerized tested treatments are for anxiety and depressive disorders (Bickel et al. 2008). Panic disorders are a subgroup researchers are looking to address through the use of technology tools. Only 28 % of the population with panic disorders seeks professional treatment leaving a large percentage in need of help. One way therapists are helping clients is through computer-based programs providing CBT. Those who did not receive treatment for various reasons, now have the option to learn how to implement CBT techniques in their daily lives through computer programs and websites. Clients can use these programs with no contact or limited contact with a therapist (Richards et al. 2006).

The treatment effects for Internet CBT are similar to other trials for pharmacological and psychological treatments. Internet CBT was found to significantly reduce the frequency and distress of panic attacks, agoraphobic evasion, depressive symptoms, and anxiety sensitivity. Consequently, clients had less difficulty with employment as well as social and family issues, which allowed them to live more fulfilling lives (Bergstrom et al. 2010). Internet CBT is helpful in working with individuals that deal with body image concerns, headaches, tinnitus, phobias/panic, and post-traumatic stress (Richards et al. 2006). Research shows that CBT e-therapy is more effective than other tested e-therapy interventions (Barak et al. 2008).

Implications for Depression Treatment

Depression is a commonly untreated mental health concern. Computerized cognitive behavioral therapy (CCBT) websites were found to be effective for mild to moderate depression. *Beating the Blues* (CCBT) program was slightly more effective than *MoodGYM* (CCBT) and *BluePages* (psychoeducation), but the latter two were effective in reducing symptoms of depression in clients (Kaltenthaler et al. 2008).

Depression often manifests when a person is newly diagnosed or has a chronic physical disability. Telecounseling programs can be a solution for a client who is not only dealing with mental health problems but also struggles with transportation issues due to his/her disability. Peer advocacy, support, and programs to help with clinical depression are effective for clients who have physical disabilities. When CBT is provided over the phone, clients reported significant improvements in their depression (Dorstyn et al. 2011).

Another population at risk for depression is family caregivers of those with dementia. An effective intervention is the computer telephone integrated system (CTIS). This system uses the computer and the telephone allowing clients to be linked to support within their family and among the community. This allows family members to be involved in family therapy even though they are not in the same vicinity. It also permits the social worker to incorporate surrounding support in the caregiver's life, which is often an essential part of the client's treatment that may be missing. The on-demand feature of receiving treatment was important to caregivers. This technology is an asset for caregivers and enhances additional treatment efforts (Eisdorfer et al. 2003).

Technology to Assist Substance Abuse

Many of the same factors used in mental health treatment can be used in the treatment of alcoholism and drug abuse. The need is great, as 16 % of those who struggle with excessive use of alcohol do not receive treatment (Postel et al. 2010). Treatment

is even more difficult to obtain for unique populations such as those who are deaf. When it comes to the access to treatment and prevention for substance abuse, researchers have found that the deaf community may be one of the most marginalized populations in America. E-therapy can be the beginning of the solution. Using the Internet and video access, a deaf person could receive treatment (Moore et al. 2009).

Researchers, Blankers et al. (2011), found that those who participated in Internet-based therapy reduced their alcohol consumption for 3 months longer than the waiting-list group. Both Internet-based therapy and Internet-based self-help were found to be effective, but Internet-based therapy was found to be more effective. Due to this found effectiveness, Internet-based interventions should be implemented in regular health care settings, providing patients access to treatment that would otherwise be unavailable (Blankers et al. 2011).

When clients were provided HIV/AIDS education in relation to drugs, they found the computer-based instruction more instructive than a therapist-delivered program and were more likely to request additional information. This is an example of the infusion of technology benefiting agencies and clients. When Bickel et al. (2008) continued their research regarding the inclusion of computerized treatment for opioid dependence, the results were comparable to the treatments without the technology component. Not only is this a cost-effective approach, the participants also disclosed the same level of therapeutic alliance as clients without the technology element. There has been a focus on how technology can increase the efficiency of treatment of psychological disorders, but additional effort needs to be put in treating substance abuse.

Training

A limitation to the infiltration of e-therapy stems from the lack of access to training regarding the use of technology in therapy (Lovejoy et al. 2009). Therapists that lack training and experience with technology, such as videoconferencing, have a lack of confidence when using this technology. Only 28 % of mental health workers in Simms et al. (2011) study had received training in using technology in therapy.

Although there would be a financial cost for an agency to help a clinician receive training in e-therapy, this investment would be beneficial for the agency in the future. Trainings would be further available as people become more proficient in offering technology services allowing them to provide trainings. A cost-effective way to incorporate training would be to offer it as part of the education in graduate schools. During internship experiences, students can practice using e-therapy techniques and they could also learn techniques in the classroom (Lovejoy et al. 2009; Simms et al. 2011). For example, if a graduate student is working in a university clinic over break, when the clients return home, the student could utilize e-mail, phone, or video chat to conduct sessions (Lovejoy et al. 2009). With increased contact with different forms of e-therapy, social workers attitudes and confidence will

increase which will lead to these techniques being offered by agencies and therefore allow more clients to be served efficiently. It needs more effort to be put in by trained social workers to provide opportunities for those untrained social workers to be exposed to the technology than additional "refresher" sessions offered, so that those who are trained can be updated on the newest evidence-based techniques as they become available (Simms et al. 2011).

Examples

Many of the examples used throughout this chapter are innovative uses of technology that social workers can currently utilize. Two additional examples are programs that are being implemented in rural East Tennessee. The first program is called *E-therapy Screening and Interventions for Vulnerable Young Adults with Substance Abuse and Co-Morbidity.* This program is run through the College of Social Work at the University of Tennessee and Helen Ross McNabb, a mental health center. East Tennessee does not have adequate resources to provide young adults (18–24 years) with the substance abuse treatment they require. This program uses technology to address the use of marijuana, alcohol, and the growing use of methamphetamine among this age group. The Internet-based interventions will provide information to clients, feedback on individual drug patterns, prevention, intervention, and referrals. The program also uses a peer outreach factor. This will mean that hundreds of young adults would be able to receive treatment previously unavailable to them.

The *Expanded Care Coordination Through the Use of Health Information Technology in Rural Tennessee* is another program being implemented by the College of Social Work at the University of Tennessee and Helen Ross McNabb. This program targets 225 people to serve during the course of the grant by providing comprehensive substance abuse and mental health treatment with the help of technology. This program is used to enhance treatment that the clients are already receiving through electronically delivered intervention. The interventions will be evidence-based and include strengths-based case management techniques, motivational interviewing strategies, and stage-of-change specific interventions, which allow clinicians the tools they need to engage and retain clients. These two East Tennessee examples show ways communities can work toward reaching people who would otherwise not receive treatment and use technology to supplement provided intervention techniques.

Conclusion

Throughout the literature, the efficacy of e-therapy is acknowledged. More research needs to be done to continue to keep up with the growing technology and explore the range of use of the technology. As shown throughout this chapter, e-therapy can

vary from the client, only interacting with the technology, to the technology being used to assist the therapeutic process. Research needs to be done to determine what level of e-therapy is most effective for different clients and their needs. E-therapy is a cost-effective form of treatment and social workers need to invest in the research necessary to provide more information and learning opportunities. A push for training social workers needs to transpire to increase confidence in the effectiveness and application of the techniques. Another need is for the NASW Code of Ethics to be revised to address the issues that arise with e-therapy. With clear guidelines and trainings on how to implement these techniques, social workers will have a solid foundation to provide evidence-based practices to their clientele. E-therapy is cost-effective, time-efficient, and allows clients to utilize the help they need when needed. The investment of e-therapy research, trainings, and guidelines will benefit agencies, social workers, and clients.

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Chapter 2
E-Therapy with Children and Adults

Jaema Hayes

The effects of e-therapy outcomes by age group deserve special attention. A meta-analysis done by Barak et al. (2008) showed that among four age group categories, client's age made a difference in terms of his/her ability to gain from the therapy given via the Internet. The findings showed that middle-aged adults (25–39) seemed to be more effectively treated than younger or older adults (Barak et al. 2008). However, these findings may be a temporary result of issues that are becoming less of a factor such as the availability and acceptance of computers, and usage skills associated with the Internet (Barak et al. 2008). In fact, researchers have shown that online therapy can be highly effective for children as well as senior adults (Hill et al. 2006; Lorig et al. 2006; Marziali and Donahue 2006). This chapter will explore the implications for e-therapy practice among adults and children with specific breakdown as follows: children (aged 3–12), adolescents (aged 13–17), emerging adults, (aged 18–25), young adults (aged 25–35), middle adults (aged 35–55), older adults (aged 55–65), and senior adults (aged 65 or older).

Introduction

The influence of the Internet on culture has been so powerful that it has been compared to the invention of the telephone in the 1870s and television in the 1950s (Chen and Persson 2002). Since its invention, the use of the Internet has become a way of life for millions of people all over the world. The psychological impact of Internet use among age groups has been studied with the majority of the research geared toward young adults who are generally more computer savvy (Chen and Persson 2002). The U.S. Census Bureau (2011) reported that over 70 % of households in

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America accessed the Internet. Broken down by age group, the majority of Internet use occurred among young and middle adults between the ages of 18 and 44 (at 82 and 81.4%, respectively), older adults around 72.4%, senior adults at 45.5%, and children and adolescents combined usage at 60.2%

The effects of the age gap on computer usage and thus online-intervention effectiveness seem to be vanishing. Since cyberspace has become a major social outlet for children, adolescents, and young adults (Fox and Madden 2006; Hall 2006; Valkenburg and Peter 2007), it is not surprising to learn that Internet-based therapeutic interventions are highly successful for those age groups as well (Barak 2007; Hoffmann 2006; Mangunkusumo et al. 2007). Despite past resistance by some, the use of computers and the Internet by older people is quickly growing and should therefore lead to an increase in mental health support for the senior population, through online therapeutic interventions such as e-therapy.

Children

Despite the efficacy of cognitive behavioral therapy (CBT) interventions with mental illnesses such as anxiety, the vast majority of children do not receive treatment (Essau et al. 2000). This may be due to the family's failure to realize that there is a problem, lack of knowledge regarding treatment, lack of local mental health services, and lack of time or money (Booth et al. 2004). It is obvious that there is a need for easy access to mental health treatment for families and e-therapy could meet that need. Research shows that adult use of Internet-based CBT for a variety of mental illnesses has proven effective, especially when combined with regular therapist contact by phone, email, or face-to-face (Spek et al. 2007). There has been a lag in the development and evaluation of computer-based interventions for childhood disorders, which is surprising given that the Internet has already become a common source of help for adolescents (Nicolas et al. 2004) and children are usually highly skilled in the use of computer technologies (Calam et al. 2000). However, recent studies have shown that web-based CBT can have highly effective results on anxious and depressive children (Spence et al. 2006). Spence et al. (2006) found that Internet therapy with children was acceptable to families, had minimal dropout, and a high level of therapy compliance. These results are promising as the need for mental health intervention is pivotal for this age group to prevent further mental health issues as these children become adults.

Adolescents

Depending on age and other sociodemographic factors, a high percentage of adolescents, between 19 and 28%, suffer from a variety of mental health problems (Patel et al. 2007; Central Bureau Statistics 200–2006; Ferdinand et al. 1995; Reijneveld

et al. 2005). These problems may impair adolescents' functioning and continue into adulthood resulting in difficulties in interpersonal relations, absence from work, higher risk of criminal behavior, and increased use of health care services (Wille et al. 2008; Caspi et al. 1996; Hofstra et al. 2001; Fergusson et al. 2005; Scott et al. 2001). Despite the prevalence of mental health problems, the majority of adolescents do not receive professional help possibly due to their reluctance to talk with adults in authority (Sourander et al. 2001; Verhulst and van der Ende 1997; Patel et al. 2007; Rickwood et al. 2007; Vanheusden et al. 2008; Zwaanswijk et al. 2003; Oliver et al. 2005).

The Internet could provide an option for adolescents to access behavior change intervention because more than half of all adolescents already use the Internet to seek health information (Borzekowski and Richkert 2001; Gould et al. 2002; Skinner et al. 2003). In 2009, 36 % of adolescents in the USA went online several times a day (Lenhart et al. 2010). Adolescents use the Internet to contact peers, access music, and play games but they search for information as well (Duimel and de Haan 2007). In addition, research shows that adolescents use the Internet to ask for help regarding mental health problems and reviews show that self-managed e-therapy appears to be effective with this population (Andersson 2009; Cuijpers et al. 2008; Stinson et al. 2009). The Internet promises to offer benefits to adolescents seeking help for mental health problems by providing information, self-tests for problems such as depression, and online help by e-mail or chat sessions with mental health care workers (Havas et al. 2009). When working with youth, health care organizations and social workers should take into account adolescents' need for online support and incorporate innovative online help for mental health problems (Havas et al. 2009). Factors that drive Internet use with adolescents include age, gender, education level, ability to recognize mental health problems, type of mental health problem, beliefs about mental health, and parent's ideas about their children's problems (Zwaanswijk et al. 2003; Vanheusden et al. 2008).

Adults and Mental Health

Mental disorders are common among adults in the USA with approximately 25 % diagnosed with one or more disorders and 6 % of Americans suffering from a seriously debilitating mental illness (Kessler et al. 2005b). Research shows that the prevalence of lifetime mental health disorders is 52.4 % for ages 18–29 (emerging adults), 55 % for ages 30–44 years (middle-aged adults), 46.5 % for ages 45–59 (older adults), and 26.1 % for senior adults over 60 years old (Kessler et al. 2005a). Of Americans with mental health conditions, only 36 % of those with a disorder are receiving treatment (Wang et al. 2005). The unmet need for therapy coupled with the barriers to traditional therapy such as cost, stigma, and inaccessibility, makes e-therapy an increasingly valid, alternate option for addressing the mental health needs for adults in America.

Emerging Adult and Young Adults

Arnett (2004) coined the term, "emerging adulthood" to describe the transitional period that occurs between late adolescence and young adulthood. This period is marked by individualistic character qualities such as accepting responsibility for one's self, making independent decisions, and becoming financially independent (Arnett 2004). The two important developmental challenges of this age group identified by Arnett (2004) are identity achievement and the development of intimacy. Research has shown that emerging adults (aged 18–25 years) have a higher incidence of depressive disorders than any other age group, which may be the result of these developmental challenges as well as adverse events unique to these individuals (Voorhees et al. 2007; Kessler and Walters 1998; Klerman 1988; Klerman and Weissman 1989).

Preventative approaches during adolescence have been introduced in an effort to reduce the prevalence of depressive disorders during this transition to adulthood (Voorhees et al. 2007). Although free-standing Internet-based programs have effectiveness levels similar to one-on-one counseling, few emerging adults complete such programs without supervision. Therefore, coupling self-directed Internet-based programs with limited face-to-face contact may increase the efficacy of these interventions (Clarke et al. 2001; Christensen et al. 2002). Additional studies have shown that the use of computer-based intervention can lead to an increase in knowledge of issues faced by emerging adults such as college drinking. These interventions also provide a screening tool to identify those participants who need follow-up in the form of additional information or therapeutic opportunities (Wodarski and Long 2006).

Like emerging adults, most young adults (79%) look up health information online with many (33–38%) using the Internet to search for mental health, prescription, and alternative medical treatments (Gowen 2013). Young adults (aged 25–35 years) face additional complications as they try to manage their mental health, including stigmatization from themselves and others as well as a lack of access to health insurance after "aging out" of their parent's policies (Gowen 2013).These barriers may leave young adults looking for alternatives to traditional methods of receiving mental health therapy. E-therapy is one possible alternative for young adults with mental health conditions (Gowen 2013).

Middle and Older Adults

It is estimated that two-thirds of American adults use the Internet, with 35% of that use being on a daily basis (Rogers et al. 2009). As more and more people integrate Internet use in their everyday routine, mental health professionals can benefit by understanding how e-therapy can be used as a tool for public mental health intervention (Ybarra and Eaton 2005). Researchers have found that 35% of adults use

the Internet to search for information regarding difficult life decisions and 26 % for information about mental illness (Fox et al. 2000). Cognitive CBT is a widely used and highly effective form of therapy for a wide range of psychological disorders, from depression to anxiety, and is very suitable for adaptation to a computer format. Internet-based therapy, including CBT, has the advantage of anonymity and accessibility making it very suitable for adult populations with mental illness (Hollon et al. 2006; Spek et al. 2006).

Barak et al.'s (2008) meta-analysis of over 92 studies of Internet-based psychotherapeutic interventions showed that mid-age adults reported higher gain from the therapy than did any other age group. There were several factors considered in the explanation of these results including the pervasiveness, acceptance, and usage skills of computers associated with this age group (Barak et al. 2008). Various studies have shown the positive effects of Internet therapy with adults using intervention models such as cognitive–behavioral, psychoeducational, and behavioral therapies when dealing with mental health problem issues ranging from post-traumatic stress disorder (PTSD), panic and anxiety, smoking cessation, drinking, body image, depression to weight loss (Barak et al. 2008). Types of modality investigated by Barak et al. (2008) included chat, forum, e-mail, audio, and webcam as means of communication between therapists and clients. Barak et al. (2008) found that Internet-based therapy, on the average, was as effective as face-to-face therapy and that online therapy can be delivered effectively using various Internet applications and online communication options.

Senior Adults

Senior citizens are the most rapidly expanding group within the USA with an estimated 50 million people, age 65 or older, in 2010 and a projected 70 million in 2030, or approximately 1 in 5 people (Jones 2001; Polyak 2000; Federal Interagency Forum on Aging Related Statistics 2000). Senior adults comprise an underrepresented but growing group of Internet users who can look forward to 10–15 years of free time spent in better health than previous generations (Trocchia and Janda 2000; Schofield 1999; The Economist 2002). Research shows that today's seniors want an active retirement with 20 % expressing a desire to participate in learning activities and 37 % saying that continuing their education is important even past retirement. (Gardyn 2000; Trocchia and Janda 2000). The Internet can benefit seniors by helping them reconnect with others and access information. However, the elderly are less likely to use the Internet than other age groups due to several factors including their pessimistic attitude toward technology, (Modahl 2000), problems with physical dexterity, and resistance to change (Trocchia and Janda 2000). It may be that additional training for seniors will help change the attitudes of some toward computer technology which could then provide the opportunity for e-therapy to be available to a greater number of seniors.

Many seniors lead active and healthy lives but as the body ages, the minds can change. Depression is not a normal part of aging, yet it often co-occurs with other serious illnesses that senior adults face such as heart disease, stroke, diabetes, cancer, and Parkinson's disease (Fiske et al. 2009). Depression is often a consequence of these problems and it can have serious effects, such as social isolation, which can lead to a risk of suicide. Although suicide rates in the elderly are declining, they are still higher than in younger adults (Fiske et al. 2009). The propensity of risk of suicide, especially among white, elderly men, makes access to mental health treatment increasingly important as a person ages. Research shows that Internet-delivered, psychoeducational interventions can be a highly effective treatment for senior adults who suffer from chronic pain or psychological symptoms (Brattberg 2006; Hill et al. 2006) and for the development of self-management skills for the chronically ill elders (Lorig et al. 2006). Videoconferencing has also been found to be effective treatment for senior adults showing that the digital divide is indeed on the decrease (Marziali and Donahue 2006).

Mental Health of Children and Adolescents

In the USA, over 4 million children and adolescents suffer from a mental disorder that causes serious problems at home, school, and with peers (U.S. Department of Health and Human Services 1999). Only 20% of children with mental health disorders are identified and receive mental health treatment in any given year (U.S. Public Health Service 2000). Half of all cases of mental disorders begin by age 14, and if left untreated can lead to more severe and difficult to treat illnesses (National Institute of Mental Health 2005). Approximately 50% of students age 14 and older with a mental illness drop out of high school, many of whom end up in jails and prisons (U.S. Department of Education 2001). Over 65% of boys and 75% of girls in juvenile detention have at least one mental illness (Teplin 2002). Suicide, the third leading cause of death in youth, is another severe consequence of untreated mental disorders among children and adolescents (National Strategy for Suicide Prevention 2001). The fact that over 90% of children and adolescents who commit suicide have a mental disorder (Shaffer & Craft 1999) underscores the need for early identification and intervention, which can save the loss of critical developmental years and avoid unnecessary suffering and death.

Conclusion

The influence of the Internet has had a powerful effect on culture and has become a way of life for most Americans. Internet use has special considerations among age groups and has implications for e-therapy. Researchers have found that e-therapy seems to be more effective among middle-aged adults but age differentials are

decreasing. Each age group has its own strengths and barriers when it comes to seeking mental health care via the Internet and research shows that most age groups can effectively be treated through a combination of e-therapy and face-to-face therapy. Social workers need to be cognizant of the effectiveness of Internet-based therapies as issues of anonymity, cost-effectiveness, and accessibility lead people of all ages toward seeking alternatives to traditional mental health care.

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Chapter 3
The Use of Computer Technology to Reduce and Prevent College Drinking

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Underage drinking, or binge drinking, (defined as having five or more drinks in a row) has become a major concern in our society. The increase in heavy drinking that occurs across the transition to college has increased professionals' awareness that there is a need for improved interventions to assist in the reduction of alcohol and substance use/abuse. At the University of Tennessee (UT), a computer-based intervention was put into place for the past 3 years with funding from the Substance Abuse and Mental Health Services Administration (SAMHSA). The intervention was provided to all college students via UT's computer network system and was completed mostly online. Students were given a computerized, standardized assessment of alcohol use and then a brief intervention was given based on the students' information. The intervention targeted students who were at highest risk for developing unsafe alcohol behaviors and/or increasing prior alcohol consumption habits in their first year of college.

This intervention has now been provided to over 54,000 graduate and undergraduate students, and since the launch of the program binge drinking has dropped 27 % on campus. Further, frequent binge drinking dropped 44 %, and the number of liquor law violations by 18–20-year-olds decreased from 542 in 2004 to approximately 158 in 2007. Three-yearly independent evaluations confirm these findings. The project has demonstrated that the use of computer technology to reduce and prevent college drinking has improved students' thoughts and behaviors related to alcohol consumption and binge drinking. This project serves as an example in the use of a harm reduction-based intervention in a venue where substance use is tolerated and normalized. The use of a computer-based intervention was comprehensive,

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low-cost, and required low maintenance. Limitations to this study were that participants could drop out of the intervention at any time, as well as the difficulty of tracking students who gave inaccurate information.

Introduction

An estimated 18 million adults in the USA who are 18 years and older currently experience problems as a result of alcohol use, and of these, 10.6 million suffer from the disease of alcoholism (Wodarski and Feit 1995). Furthermore, multiple studies reported to the Centers for Disease Control and Prevention (CDC) in 2008 discovered that approximately 90 % of alcohol consumed by youth under 21 in the USA is in the form of binge drinking. In addition, the proportion of current drinkers that binge is the highest in the 18–20 year-old group (51 %) (Centers for Disease Control and Prevention 2008). Undergraduate drinking, or binge drinking, (defined as having five or more drinks in a row) has become an urgent concern among parents, public health officials, college personnel, and society at large. The increase in heavy drinking that occurs across the transition to college has prompted alcohol researchers to persistently search for effective interventions to reduce the commonly coined phrase "binge drinking" (Sher and Rutledge 2007). Binge drinking has now become the common term used to describe college drinking that has become problematic, so much so that the authors of *Binge Drinking: Not the Word of Choice* have suggested replacing "binge drinking" with the term "dangerous drinking," to describe drinking behavior that results in unintended or undesirable consequences, to send a stronger, more identifiable message to adolescents and young adults (Goodhart et al. 2003). Nevertheless, young adults, in comparison with any other age group, have the highest prevalence of high-risk drinking in the USA (Hingson et al. 2003).

This chapter's intent is to present an accumulation of insight regarding the causes and consequences of college drinking and binge drinking. In addition, its purpose is to shed light on computerized assessment and feedback that have proven to be effective in this study, if not more effective and less expensive than traditional person-to-person interventions. Further discussion describes a particular computer intervention program being designed and implemented at the University of Tennessee (Wodarski and Long 2006).

The minimum drinking age in the USA stands at 21, yet many adolescents and young adults who are underage consume alcohol. The percentage of alcohol consumed by the underage individual before entrance into college typically increases after making the college transition. This transition is accompanied by a major change in drinking behavior that occurs over a relatively brief time span where these young adults who were initially drinking less than their peers who did not go to college, are now drinking more (Sher and Rutledge 2007). A research study completed by The Brown University Digest of Addiction Theory and Application found that college freshmen drink at levels well beyond the binge threshold (four or more drinks for females and five or more drinks for males). The findings indicated that frequent binge drinkers binge more often, and are more likely to drink at peak

levels two and three times the binge threshold (2007), thus increasing the risk of potentially dangerous situations. Alcohol is a factor in nearly half of all accidental deaths, suicides, and homicides, including 42 % of all deaths from motor vehicle accidents, and this percentage increases with binge drinking (Wodarski & Feit, 1995). Students are likely to experience significantly more problems including, but not limited to, serious health problems, injuries, and unplanned sex (Carey and Correia 1995; Midanik et al. 1996; Wechsler et al. 2002).

On many college campuses, alcohol consumption is considered a rite of passage, particularly by entering freshmen. Freshmen want to be distinguished as college students, not high school students. Due to this pressing desire to be seen as older, they are more willing to follow the norms of older college students, thus reinforcing the idea that alcohol is a necessary and acceptable part of college life (Wodarski and Long 2006). Hawkins et al. (1992) suggest that one of the strongest variables correlated with college drinking is social influence. Due to the perception of some college students' social norms, their amount of alcohol consumption is typical and within their peers' drinking habits. However, some studies have revealed that students often overestimate both the acceptability and the actual drinking behavior of their peers (Parris and Wodarski 2004; Wechsler et al. 1999).

In a 2004 study to determine predictors of undergraduate student binge drinking, Strano et al. (2004) uncovered seven variables that were significant predictors of those who had or had not engaged in binge drinking. The seven predictors included: ethnic group (other than African American), freshman status, fraternity or sorority membership, positive alcohol expectancies, prior drug use, no or low perceived risk, and friends' opinion of binge drinking. Further findings demonstrated that race, class, fraternity or sorority membership, use of other drugs in the past 30 days, perception that friends do not disapprove of binge drinking, and perception of high normative drinking were factors in predicting episodes of binge drinking. In addition, students who engaged in binge drinking were more likely to use tobacco or marijuana and to have more sexual partners (Wechsler et al. 1995). Beyond the health and safety concerns, the culture of college drinking must be challenged because environmental factors that influence students in the college environment, such as peer influence/expectations, past family alcohol consumptions, personality, and biological factors, may dramatically increase students' susceptibility to alcohol use, abuse and/or addiction (Wodarski and Long 2006).

The consumption of alcohol is a significant problem among college students at multiple university settings and is of particular concern to the University of Tennessee (UT). The alarm was heightened in 2001 after UT, home to 19,000 undergraduate students and 5000 graduate students, was awarded the dubious distinction of being the nation's top "party campus" in a Princeton review. In 2003, the Tennessee Bureau of Investigation reported 11 drug violations, 50 incidences of DUIs (driving under the influence), and 415 liquor violations on the University of Tennessee campus. In addition, data from the UT Core Survey given in the fall semester of 2004 to students at UT revealed that over 31 % of students were drinking more than five drinks at a session (generally seen as indicating at-risk drinking or binge drinking), which translated to roughly 8000 students. Consequences exposed by the UT Core Survey were that 37 % of students reported public misconduct (trouble with police; fighting; driving while

intoxicated, DWI/DUI; vandalism) and 27% reported serious personal problems (suicidality, being injured, trying unsuccessfully to stop using, and sexual assault).

The surmounting evidence that UT was losing the battle against substance use on campus spawned a renewed interest in finding new methods and interventions to reduce the use/abuse of alcohol and drugs. Due to the efficacy and prevalence of computer software that addresses problem drinking and provides brief interventions, as well as the fact that the use of computers is a more cost-effective intervention and is the easiest method of getting the information to the greatest number of participants, it was concluded that a computer-based program to address problem drinking could be used at the University of Tennessee.

Program Description

The Substance Abuse and Mental Health Services Administration (SAMHSA) and Center for Substance Abuse Treatment (CSAT) are funding the University of Tennessee for 3 years to implement "Using Computers to Screen and Provide Brief Intervention for Underage Alcohol/Substance Abuse on College Campuses." This 3-year study of harm reduction-based prevention/early intervention initiative was aimed initially at the undergraduate students, but after further research, incorporated the graduate student population.

The intervention utilized the university's computer network to provide college students with basic knowledge concerning substance use and abuse, feedback on individual drug patterns, two levels of treatment intervention, and referrals to university and community treatment agencies in an attempt to reduce the incidence of alcohol consumption among UT students. Additionally, the intervention assisted in increasing students' awareness of their own potential risks by giving immediate feedback and individualized recommendations (Parris and Wodarski 2004).

A computer-based screening and intervention program based on the BASICS (Brief Alcohol Screening and Intervention for College Students) intervention developed by Dimeff et al. (1999) was provided to all students (n=approximately 24,000). The adaptation of the program provided a computer-based screening and brief intervention, reinforced with peer outreach workers. These workers provided outreach services in high-risk situations, including residence halls, spring break venues, football/basketball games and other sporting events, and Greek events, in order to provide additional outreach to potential high risk students.

Due to the majority of students having access to computers, either by means of their own personal computers or by the computers found on UT's campus, the intervention was provided on the campus computer network. Several components were applied on the prevention and intervention website. Students were given a computerized, standardized assessment of alcohol use. Following the assessment, a brief intervention was provided in response to the information gathered from the student during the standardized assessment of alcohol use. Then students were provided with referral sites, along with resources available from the University of Tennessee.

The intervention targeted students who are at highest risk for developing unsafe alcohol behaviors and/or increasing prior alcohol consumption habits in their

first year of college. All incoming freshmen had the opportunity to participate in the study. Once a student opened his or her college email account, he or she was given the opportunity via Internet link to participate in the study. The Internet site provided more in-depth information concerning the College Substance Abuse Prevention Program (CSAPP) and provided contact information for students if they had further questions or if they were in need of technical assistance. Students who decided to participate must have signed a confidentiality statement, which insures strict confidentiality, as well as informs upfront that participation is completely voluntary and the student reserves the right to withdraw at any time. The student was then given a random identification number to maintain the individual's anonymity, after which the participant continued on to complete the five components of the computer-based intervention.

Component 1: General Information

A computerized self-report assessment obtains measures of a student's (a) typical drinking pattern and episodic drinking occasions, (b) expectations concerning alcohol use, (c) perceptions about the norms of college student drinking, (d) support for alcohol use in the student's peer group, (e) health risk behaviors, and (f) negative consequences stemming from alcohol use. Students' answers to these questions help determine their level of alcohol consumption.

Component 2: The Nonuser

A distinguishing factor of the "using computers to prevent irresponsible college drinking" intervention is the explicit recognition that some students entering college have not begun alcohol use.

- *Screen I-* presents nondrinking students with an acknowledgment of their decision not to drink. It will present statistics on the negative consequences the student is missing by not drinking.
- *Screen II-* presents the distribution of weekly drinking activity of the college population. The percentage of nondrinkers will be highlighted.
- *Screen III-* emphasizes the factors that commonly influence alcohol use initiation: conformance to the behaviors of friends (norms), expectations of the benefit of alcohol use, modeling by older students, and lack of "fun" activities.
- *Screen IV-* presents the student with information on how to recognize alcohol-related behaviors in other students and provides a listing of campus-based services that can be contacted to get help with the disturbances that can accompany alcohol use by students on campus (loud noise, aggressive behaviors, and alcohol overdose).
- *Screen V-* acknowledges the student's choice in not drinking as a legitimate, sound decision and part of the student's own choice for building a healthy lifestyle. It will then list campus organizations that are alcohol free.

Component 3: The Occasional User

Most students (54 %) report having fewer than eight drinks per week (Johnson et al. 1994). This level of consumption places them in the low to moderate range for alcohol use. In preparing feedback to students in this category, a harm reduction approach was followed. Students were encouraged to examine their use of alcohol and weigh the perceived benefits of use against the actual biological effects of alcohol and the risk of negative consequences such as hangovers, missed classes, and deterioration of school performance.

- *Screen I-* presents the student's weekly drinking habits recorded previously (general information) with the weekly number of drinks in the college population.
- *Screen II-* discusses alcohol, along with explanations of gender differences in metabolism of alcohol that affect blood alcohol levels (BAC).
- *Screen III-* reports the degree of peer support for alcohol use and discusses the influence that peer groups have on reinforcing potentially harmful behaviors.
- *Screen IV-* discusses the effects alcohol has on mood and other mental states. Also, this screen will explain the basic effects of alcohol in general.
- *Screen V-* explores the negative consequences attributed to alcohol use. Feedback will be given on the level of negative consequence the student attributes to her or his alcohol use. This information will be obtained from the general information screen previously completed by the student.
- *Screen VI-* encourages the student to create a change plan with reduced consumption goals. During this screen, the student will complete an online version of the Alcohol Use Disorder Identification Test (AUDIT).
- *Screen VII-* directs the student to campus activities that promote alcohol- and drug-free lifestyles.

Component 4: The Heavy Drinker

This component of the intervention has eight screens directed toward reducing or eradicating heavy drinking behavior among students who admit to drinking heavily.

- *Screen I-* compares the student's weekly drinking habits recorded previously (general information) with the weekly number of drinks in the college population.
- *Screen II-* discusses alcohol, along with explanations of gender differences in metabolism of alcohol that affect blood alcohol levels (BAC).
- *Screen III-* reports the degree of peer support for alcohol use and discusses the influence that peer groups have on reinforcing potentially harmful behaviors.
- *Screen IV-* discusses the effects alcohol has on mood and other mental states. Also, this screen will explain the basic effects of alcohol in general.
- *Screen V-* explores the negative consequences attributed to alcohol use. Feedback will be given on the level of negative consequences that the student attributes to

his or her alcohol use. This information will be obtained from the general infor-
mation screen previously completed by the student.

- *Screen VI-* encourages the student to create a change plan with reduced con-
  sumption goals. During this screen, the student will complete an online version
  of the Alcohol Use Disorder Identification Test (AUDIT). Those scoring above 8
  will be strongly encouraged to seek professional help.
- *Screen VII-* allows students to identify settings in which they are likely to engage
  in drinking behavior, evaluate the risk of heavy drinking for that setting, and de-
  velop consumption targets as guides for controlling their alcohol consumption.
- *Screen VIII-* directs the student to campus activities that promote alcohol- and
  drug-free lifestyles.

Component 5: Alcohol Dependence

Students whose information suggests they might be severely alcohol-dependent
or who have medical conditions for which the use of alcohol is contraindicated
(e.g., pregnancy, ulcers, diabetes) are strongly encouraged to abstain from alcohol
use and to accept a referral to an abstinence-based treatment program. A listing of
campus-based referral sources and contact numbers will be provided.

Tracking System

The tracking system uses the student's email address, which is given during regis-
tration for the program. Once the email address is in the system, this is how the par-
ticipant will receive feedback. Registration also includes a password, age, gender,
weight (for body mass index, BMI, purposes), race, and class level.

Current research suggests that less invasive interventions are more acceptable
than traditional group or individual counseling with college-age students. Because of
this, there are several benefits of a computer-based intervention. First, the individual
may be more likely to disclose personal and sensitive information if the information
can be given via email. Second, the individual who chooses to participate in the
study is likely to already have an interest in the topic of alcohol consumption. Third,
computer-based interventions offer low-cost, preliminary treatment options to serve
a greater number of clients at one time (Squires and Hester 2002).

Limitations

The website also contains a detailed disclaimer explaining that this program is not
intended to provide therapy and is not a substitute for a licensed therapist. The pro-
gram is implemented with incoming freshmen in mind, although other undergraduate

and graduate students do benefit from the intervention as well. The program allows students to quit at any time, due to the intervention being completely voluntary which makes these students difficult to track. Another dilemma is that it is often difficult to track students who did not give accurate information. Finally, a third obstacle is that the program utilizes self-reports and therefore the confidentiality guaranteed to students does not allow for third party monitoring.

Results

Nearly 2½ years after initiating this project on January 1, 2006, the intervention has been provided to approximately 54,000 students. A subset completed the brief intervention ($n=5775$) and 76.7% were transitioned to a computer-based self-assessment ($n=4430$). Based on the results of the self-assessment (AUDIT score greater than 8), in-person services were offered ($n=1122$), and accepted, by over one-third of the participants (41.8%, $n=469$). Formal treatment services were accepted by over half ($n=238$, 81.7% of goal) and completed by 160 (85.1% of goal), including a subset of individuals with extremely high AUDIT scores ($n=36$).
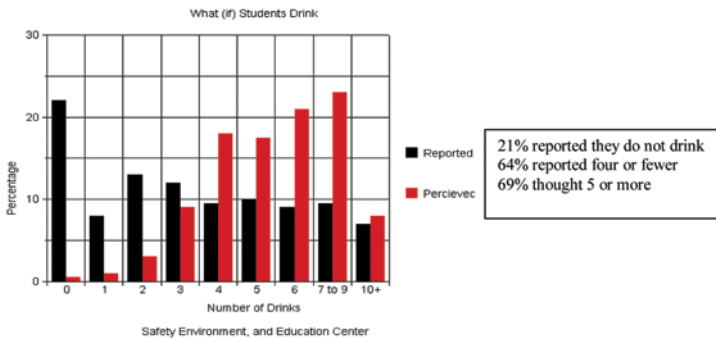
Individual AUDIT scores improved at statistically significant rates. Since the launch of the program, binge drinking has dropped 27% on campus (48–35% reduction in number of student reporting drinking five or more drinks at a time), and frequent binge drinking has dropped 44% (25–14% reduction in the number of students reporting drinking five or more drinks at a time three or more times in the past 2 weeks). The trend analysis demonstrates that the intervention is statistically significant through time. Yearly independent evaluations consisting of 5000 randomly chosen students who were administered independent inventories by the University of Tennessee's Student Services confirm the findings.

UT vs. National
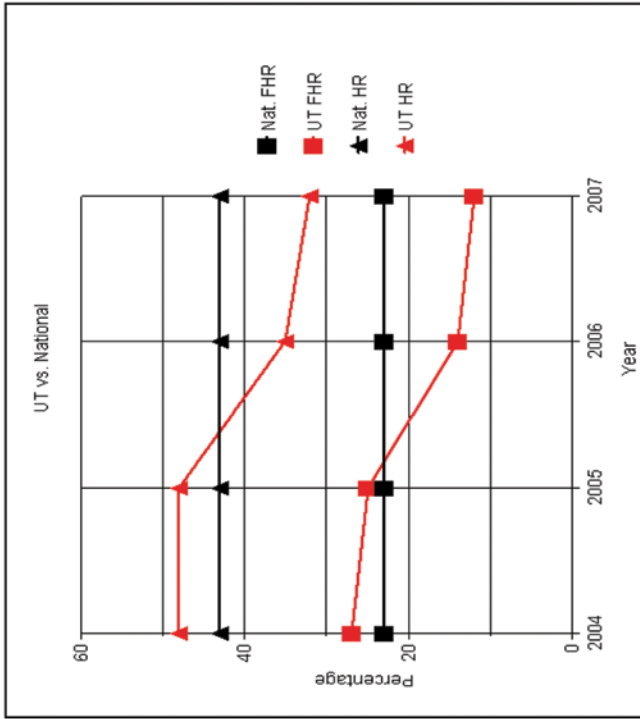
(HR - High Risk Drinking / FHR - Frequent High Risk)
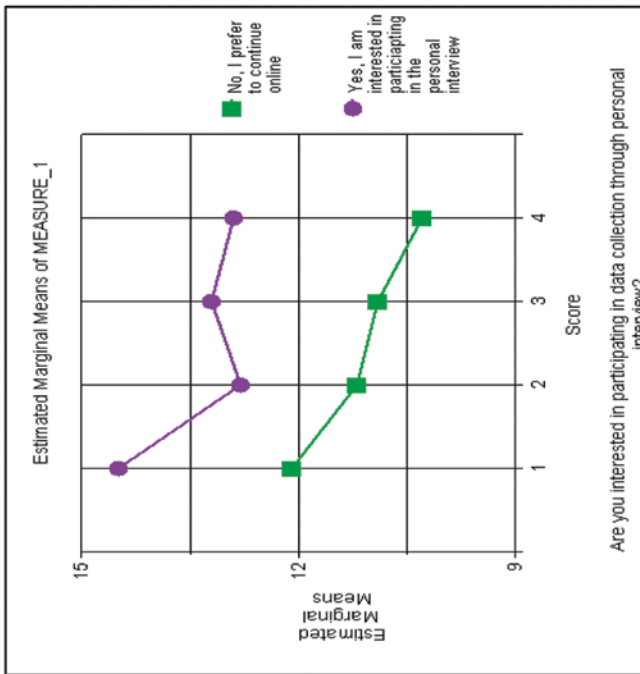
Estimated Marginal Means of MEASURE_1

Table 3.1 Multivariate test

Source	DF	F	p
Total	9	44.97	<.01
Time periods	2	40.11	<.01
Years	2	1.07	NS
Time periods × years	4	38.98	<.01
Error	5.664		

The overall multivariate test using the AUDIT was $DF=9$, 5.664; $F=44.97$; and the probability less than .01 (Byrne 2010; Raudenbush and Bryk 2002; Montgomery and Runger 2007; Tamhane and Dunlop 2000).

Trend analysis and Duncan's new multiple range test indicated significant differences between baseline and discharges for 3 years. The replicated design negates the need for a control group as the main effect occurred for 3 years in a row and controls for all internal and external rival hypotheses that might account for the results (Montgomery 2008; Table 3.1).

Discussion

The total costs of adolescent and young adult binge drinking are incalculable. Binge drinking is best viewed as a complex activity that needs to be challenged at multiple levels by making simultaneous changes in the campus culture, norms among friends, personal attitudes and other behavior, and perceptions of risk. No one influence on binge drinking can be addressed without considering the other major influences, thus a successful intervention necessitates attention to the diverse factors (Strano et al. 2004). The computerized intervention utilized on the campus of the University of Tennessee has taken these multiple factors into account by providing students with the most up-to-date information pertaining to alcohol use and abuse. Students were informed of their own as well as the greater student bodies' typical drinking patterns, perceptions about the norms of college student drinking, health risk behaviors, and negative consequences stemming from alcohol use. Students were informed that despite the fact that there are differences in how alcohol affects BAC among men and women, the marginal impact of heavy episodic drinking on grades is essentially the same for both genders. Men and women face similar decreases in grade point average (GPA) of about a third of a point on a four-point scale (Wolaver 2007). In addition, students were made aware of factors that influence alcohol use, explored the different effects of alcohol on mood and other mental states, and were encouraged (if needed) to create a plan of change to reduce consumption. This project served as an example in the use of a harm reduction-based intervention in a venue where substance use is tolerated and normalized, and may have provided implications for other similar arenas.

The project demonstrated that the use of a computerized intervention, completed primarily online by most students, using the campus computer network significantly improved students' thoughts and behaviors related to alcohol consumption and binge drinking. Furthermore, the intervention showed the capability to screen an entire campus and make big changes. The project illustrated that students are more likely to access treatment more readily via computer network, thus allowing more individuals to be reached. According to the survey results from the past 3 years from the Safely, Environment, and Education (SEE) committee, UT's drinking rates have declined significantly. In fact, from 2004 to 2007, high-risk drinking has declined by 27% compared to the national high-risk drinking levels. Additionally, in accordance with decreased drinking levels, the number of liquor law violations by 18–20-year-olds has decreased from 542 in 2004 to approximately 158 in 2007 according to the UT police department.

However, in order to continue to address the multiple levels to this epidemic there is a need for stronger involvement from the campus community. One component, which could assist UT's binge drinking intervention to a great extent, would be assistance from the local bars and restaurants. Currently, at some locations, happy hour includes two-for-one specials on alcoholic beverages and on select nights at other locations, customers can purchase quarter beers. Furthermore, many of the local restaurants and bars have received citations and suspensions for serving alcoholic beverages to minors. Eliminating extravagant alcohol specials and increased training for bartenders on the dangers associated with binge drinking as well as the risks in serving a minor could begin to alter the perception of drinking and thereafter the campus culture. With increased advertising and peer outreach there is a likelihood that myths regarding alcohol could be dispelled leaving room for facts only.

Conclusion

The consequences of excessive drinking by college students are more significant, more destructive, and more costly than ever, and these consequences affect students whether they drink or not (NIAAA 2007). Interventions timed to occur in the early months of college may disrupt the momentum of previously established drinking behavior, therefore breaking bad habits before they have the ability to further deteriorate. However, for those individuals who are in the thick of the use/abuse, the stigma that is linked to alcohol related problems presents barriers to traditional methods of prevention and treatment. Yet, computer-based interventions permit at least one solution to this barrier. This program is a systematic way in which college students can be targeted for alcohol problems through the use of a computer intervention. By using this method students maintain a sense of anonymity while receiving non-judgmental help for their drinking problems. Thus, allowing students to seek help, when and if they are ready, from the privacy of their own homes (Wodarski and Long 2006).

Due to brief interventions being among the least costly and most efficient treatment interventions, the program discussed here was designed to adapt brief

intervention technology, developed in the alcohol treatment field, to a computer-based delivery system. This comprehensive, low-cost, low-maintenance intervention can be promoted on college campuses and campus-wide as a voluntary information site about alcohol. Another opportunity for this program is to implement it as a portion of the orientation experience for students, thereby ensuring that all incoming freshman students visit the site, if not complete the program, in an effort to continue to reduce the effects of binge drinking at universities (Wodarski and Long 2006).

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Chapter 4
The Effectiveness of Electronic Approaches to Substance Abuse Prevention for Adolescents

Laura Hopson, John S. Wodarski and Ning Tang

Systematic reviews of computer and Web-based treatment approaches indicate that these interventions are effective in addressing abuse of alcohol, tobacco, and other substances. However, there are few studies evaluating the effectiveness of electronic approaches to substance abuse prevention. This review of the literature synthesizes the current research on interventions that use electronic media, including CD-ROM, video, and Internet modalities, for substance abuse prevention. Overall, the studies indicate that electronic-based and enhanced interventions are effective in preventing or reducing risk for substance use. The authors discuss trends in the current literature, research limitations, and implications for practice.

Introduction

According to Healthy People 2020 objectives, the need for greater access to prevention and treatment is underscored by the fact that only about 5 % of individuals who abuse substances are aware that their substance use is problematic. Among those who recognize the risks associated with their substance use, many are unable to access treatment. The costly health and social consequences of unaddressed substance abuse include teen pregnancy, sexually transmitted diseases and

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HIV/AIDS, domestic violence, child abuse, criminal activity, homicide, and suicide (U.S. Department of Health and Human Services 2010).

Although many prevention programs have demonstrated their efficacy in research trials, few community organizations implement these programs. When research-based interventions are used in the community, they are rarely implemented with fidelity (Botvin 2004). Reasons for this gap between research and practice include the human and economic resources required to implement these programs (Castro et al. 2004). Many research-based programs are costly to implement and require facilitators with specialized training.

Computer and Web-based substance abuse prevention programs have emerged as a potential solution to the problem of limited access to effective interventions and service providers. These interventions present low-cost service options that can serve a large number of clients at one time (Hill et al. 2006; Squires and Hester 2002). They are not constrained by the need for physical meeting spaces and are able to accommodate those who have scheduling constraints. They often allow for individualization of the curriculum, ongoing feedback, and active learning (Alterman and Baughman 1991). Computer technology also allows for providing normative feedback in a nonthreatening, confidential manner. In addition, participation in electronic interventions may come naturally to those who are spending more of their work and social time online.

Research on electronic interventions has lagged behind their implementation. Thus, there is a great need for studies that demonstrate how these interventions stand up to their more traditional counterparts. Electronic interventions have been found to be effective in treating a range of psychological disorders (Abbott et al. 2008; Cunningham et al. 2006; Khanna et al. 2007; Rockinson-Szapkiw et al. 2009). A recent meta-analyses comparison of face-to-face and Web-based interventions revealed no differences in effectiveness (Barak et. al. 2008). Moreover, research indicates that computers are an increasingly effective means for helping adolescents and young adults acquire knowledge and effect behavioral change (Bobicz and Richard 2003; Barak et al. 2008).

Systematic reviews of computer and Web-based treatment approaches indicate that these interventions are effective in addressing abuse of alcohol, tobacco, and a range of other substances. However, there are few studies evaluating the effectiveness of electronic approaches to substance abuse prevention, the focus of the present review.

The following review of the literature synthesizes the current research on interventions that use electronic media for substance abuse prevention. The authors used ERIC, Academic Search Complete, Education Research Complete, CINAHL, MEDline, and PsychInfo databases to locate English-language studies published between 2000 and August 2012. Key search terms included computer or video or Internet or Web) and (prevention or intervention) and (substance use or drug use or alcohol use or tobacco use).

There are many approaches to electronic interventions, from video enhanced models to fully online interventions. Articles were included if they reported findings from an evaluation of an intervention that:

1. used computers or electronics (i.e., Internet, CD-ROM, or videos) as a significant part of the intervention;
2. aimed to prevent use of substances, including alcohol, tobacco, or illicit drugs, or aimed to reduce risk for substance use; and
3. included a control or comparison condition.

Table 4.1 provides an overview of research studies evaluating prevention interventions that meet the above criteria

Interventions that Employ Video and CD-ROM Technology

Computer-based prevention programs have demonstrated effectiveness in reducing substance use, improving knowledge and attitudes related to substance use, and mitigating intentions to use substances. Using videos or CD-ROM technology can significantly reduce the training and implementation costs of substance abuse prevention programs. They can also improve treatment fidelity, since that material is presented exactly as the program developers intended (Bickel et al. 2008). However, the limited flexibility of these programs also presents challenges if practitioners and clients feel that the videos do not resonate with their culture or life experiences (Holleran et al. 2005).

Keepin' it REAL is a school-based substance abuse prevention program that uses videos to teach students four resistance strategies: Refuse, Explain, Avoid, and Leave. The curriculum teaches students four different strategies for resisting drug use: Refuse, Explain, Avoid, and Leave (Marsiglia and Hecht 2005). The program has been evaluated in multiple randomized trials with students from diverse racial and ethnic backgrounds. Students who received the curriculum experienced decreased substance use and improvements in attitudes about substances and use of resistance strategies (Hecht et al. 2003). In addition, students who saw at least four of the videos designed for the curriculum engaged in less substance use following the intervention than students who saw fewer than four videos (Warren et al. 2006). Thus, the videos seem to enhance the effectiveness of the curriculum.

Two CD-ROM-based interventions also targeted reduction in the use of multiple substances. The first, CLIMATE, includes an interactive teen drama. As with keepin' it REAL, its positive outcomes have been replicated across multiple studies. Teens participating in the interventions experienced improved knowledge about alcohol use and less favorable attitudes toward substance use. The program also resulted in decreased alcohol consumption (Newton et al. 2010), although one study found that only girls participating in the intervention decreased their alcohol use (Vogl et al. 2009). The second employs interactive CD-ROM technology to teach social resistance skills, general personal and social competence skills, and normative education to 6th and 7th graders (Williams et al. 2005). As with CLIMATE, participants receiving this CD-ROM intervention had significantly greater reductions

Table 4.1 Overview of electronic approaches

Author(s)	Description	Setting and population	Design	Outcomes
Aveyard et al. 2001	A CD-ROM-based tobacco use prevention program	Ninth grade students ($n=4227$) from 52 West Midlands schools	Schools were randomly assigned to intervention (26 schools) and control (26 schools) conditions. Measures were administered at pretest, 12 months, and 24 months	There were no significant differences between groups in smoking behavior at 12 or 24 months
Bersamin et al. 2007	College Ale, a Web-based alcohol-misuse prevention course	Incoming college freshmen ($n=622$) who reported any past 30-day alcohol use before the beginning of the semester at a Northern California Public University	Students were randomly assigned to either the College Ale ($n=310$) or control group ($n=312$). Measures were administered at pretest and follow-up	Among freshmen who were regular drinkers before college, participants in college Ale resulted in reduced frequency of heavy drinking, drunkenness, and negative alcohol-related consequences
Bingham et al. 2011	Michigan Prevention and Alcohol Safety for Students (M-PASS), a Web-based brief alcohol use prevention program	Freshmen students ($n=1200$) who were ages 18 through 20, living in a dormitory	Dorms were matched based on several criteria and assigned to intervention and comparison groups. Participants were placed into one of three groups: nondrinkers, low-risk drinkers, and high-risk drinkers. Measures were administered at pretest, posttest, and 3-month follow-up	Participants in M-PASS reduced their drinking behavior and improved their use of risk-reduction strategies relative to control group participants
Bishop et al. 2006	The purpose of the present study was to examine the efficacy of a substance abuse-preventive intervention using CD-ROM technology	Sixth and seventh grade students ($n=123$) from approximately 23 schools	Participants were randomly assigned to either receive the CD-ROM preventive intervention ($n=61$) or to serve as a control group ($n=62$). Self-report data were collected at pretest and posttest	There were significant intervention effects on prodrug attitudes, normative expectations for peer and adult substance use, anxiety reduction skills, and relaxation skills knowledge, with intervention students reporting improved scores on these outcomes at the posttest relative to control students

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Buller et al. 2008	Consider this, a Web-based intervention for prevention of smoking	Students in grades six through nine in Australia ($n=2077$) and the US ($n=1234$)	Schools were matched and randomly assigned to intervention and control conditions. Measures were administered at pretest and follow-up	Australian participants in the intervention group reported reduced smoking relative to control group participants; American participants reported lower expectations for future smoking
Croom et al. 2009	AlcoholEdu for College, an interactive alcohol education course	Incoming first-year students ($n=3216$) at a mid-sized, rural, elite, private university in the northeast	Participants were randomly assigned to either an intervention ($n=1,608$) or control ($n=1,608$) group. Measures were administered at pretest and follow-up	The intervention group showed significantly higher alcohol-related postcourse knowledge compared to the control group. However, there were no significant differences in risk-related behavior, with the exception of playing drinking games
DiNoia et al. 2003	CD-ROM and Internet-based materials for training facilitators of substance abuse prevention programs	Professions ($n=188$) in schools, community agencies, and policy-making bodies	Participants were randomly assigned to receive prevention program materials via pamphlets (55 participants), CD-ROM (64 participants), and the Internet (69 participants). Measures were administered at pretest, posttest, and 6-month follow-up	Participants exposed to dissemination via CD-ROM and the Internet evidenced the greatest short- and long-term gains on accessibility, self-efficacy, and behavioral intention variables
Epstein et al. 2007	The Doubles, a seven-episode curriculum delivered through a set of DVDs, interactive CD-ROMs, workbooks, or a website designed to teach students about the science of drug addiction	Third and fourth grade students ($n=274$) from five elementary schools in a rural school district in Missouri	Five schools were randomly assigned to a control condition or one of the following intervention conditions: (1) Video-based, (2) CD-ROM-based, (3) Web-based, or (4) Workbook-based	Students receiving the video-based, CD-ROM-based, or Web-based intervention had more improved knowledge about substance use relative to students in the workbook-based or control conditions. The intervention did not significantly change students' attitudes toward substance use

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Hansen et al. 2009	Online-enhanced all stars, a substance abuse prevention program	Program facilitators (teachers) in 24 schools and 2 community agencies	Twelve schools and one community group were randomly assigned to receive the online-enhanced all stars condition, and 11 schools and one community group were assigned to receive the traditional version of All Stars. Measures were administered at pretest and posttest	Teachers who used the enhancements found it easier to implement key program components compared to facilitators who taught the program as usual. Teachers in the technology-enhanced condition reduced the time required to complete otherwise time-consuming tasks
Hecht et al. 2003	keepin' it REAL, a 10-session curriculum including 4 video-based sessions promoting antidrug norms and skill building	Students ($n=6035$) in 35 middle schools in Arizona	Thirty-five middle schools were randomly assigned to a control condition or 1 of 3 versions of kiR: Mexican American, combined African American and European American, and Multicultural. Questionnaires were administered at pretest, posttest, 8-month, and 14-month follow-up	Students receiving any version of the intervention reported significantly smaller increases in substance use than control students. Students receiving the Mexican American reported significantly smaller increases in recent substance use and in recent cigarette use relative to students in the other groups
Hustad et al. 2010	Web-based alcohol prevention for incoming college students	Students ($n=150$) who were 18-years-old or older and first-time college students (nontransfer student) who attended a high school in the USA	Participants were randomly assigned to receive AlcoholEdu or e-Chug, or serve as a control group. Measures were administered at pretest and 1-month follow up	Compared to the assessment-only control group, participants in the AlcoholEdu and e-Chug groups reported lower levels of alcohol use at follow-up. Participants who received AlcoholEdu showed significantly fewer lower alcohol-related consequences relative to the control group
Koning et al. 2011	A Web-based alcohol use prevention program: four lessons for adolescents and parent sessions	Ninth graders ($n=3490$) within 19 high schools in the Netherlands and their parents	Participants were randomly assigned to the student-only intervention, a parent-only intervention, a combined student and parent intervention, and a control condition. Measures were administered at pretest and 34 months postintervention	Participants in the combined students and parent intervention significantly reduced their alcohol use relative to the other groups

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Kypri et al. 2004	Web-based screening and brief intervention (e-SBI) to reduce hazardous drinking	Students ($n = 104$) between 17 and 26 who were users of the Student Health Service of the University of Otago	Participants were randomly assigned to 10–15 min of Web-based assessment and personalized feedback on their drinking or to a leaflet-only control group. Measures were completed at pretest and follow-up	Participants receiving e-SBI reported significantly lower alcohol consumption and lower frequency of episodes of heavy drinking
Moore et al. 2005	Wed-based binge drinking prevention	College students ($n = 116$)	Students were randomly assigned to receive either Web-based or print materials. Measures were completed at pretest and posttest	There were no significant differences on outcome measures when delivered via the Internet or postal mail
Lord and D'Amante 2007	A Web-based substance use prevention program	Students ($n = 295$) from eight middle and high schools in the greater Boston area	Participants were randomly assigned to receive a Web-based intervention, a video-based intervention, or a comparison condition. Measures were administered at pretest, posttest, 3-month, and 6-month follow-up	Participants receiving the Web-based intervention had improved drug-related knowledge and reduced intention to use substance relative to participants in the other groups
Neighbors et al. 2010	Personalized normative feedback (PNF), a Web-based intervention designed to reduce normative misperceptions about drinking and, thereby, reduce drinking behavior	Freshmen ($n = 818$) who reported one or more heavy-drinking episodes in the previous month at baseline	Participants were randomly assigned to gender-specific vs. gender-nonspecific PNF, single vs. biannual administration of PNF, or a control group. Measures were administered at pretest and 6, 12, 18, and 24 months after baseline	There were few significant overall differences between gender-specific and gender-nonspecific feedback or between single versus biannual administrations of feedback. For women, but not men, gender-specific biannual PNF was associated with reductions in alcohol-related problems in comparison to women in the control group

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Norman et al. 2008	Smoking Zine, a Web-based smoking prevention program in 5 stages	Students ($n=1402$) in grades 9 through 11 from 14 secondary schools in Toronto, Canada	Participants were randomly assigned to intervention ($n=661$) and control ($n=728$) groups. Measures were administered at pretest, posttest, 3-month, and 6-month follow-up	Intervention group participants significantly reduced intentions to smoke relative to control group participants. Nonsmokers in the intervention group reduced cigarette use
Newton et al. 2010	CLIMATE, a universal Internet-based alcohol and cannabis prevention program	Year 8 students ($n=764$) from 10 independent high schools across Sydney metropolitan area in Australia	Participating schools were assigned randomly to either the control condition or the intervention condition. Measures were administered at pretest, posttest, and at 6 and 12 month follow-up	Participants in the intervention group showed significant improvements in alcohol and cannabis knowledge, a reduction in average weekly alcohol consumption and a reduction in frequency of drinking to excess
Prokhorov et al. 2008	Five sessions delivered by CD-ROM for smoking prevention and reduction	Adolescents ($n=1574$) between 15 and 16 years	Sixteen schools were randomly assigned to receive the CD-ROM-based intervention or traditional services. Measures were administered at pretest and follow-up	Participants receiving the intervention were less likely to initiate smoking. Intervention group participants who were already smoking were more likely to reduce smoking than those in the Comprison group
Rohrbach et al. 2010	Project Toward No Drug Abuse (TND), an evidence-based prevention program for high school students	Students ($n=2983$) from 65 high schools in 14 school districts across the USA	Participating schools were randomly assigned to one of three experimental conditions: comprehensive implementation support for teachers, regular workshop training only, or standard care control. Measures were administered at pretest and posttest	Immediate effects of TND may be produced when the program is implemented in a wide variety of high school by classroom teachers who have received program-specific training prior to program delivery

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Schinke et al. 2011	A computer-delivered family intervention approach for preventing substance use	Black and Hispanic American adolescent girls ($n=546$) and their mothers from New York, New Jersey, and Connecticut	Mother–daughter pairs were randomly assigned to intervention and control groups. Measures were administered at pretest and posttest	Girls in the intervention group significantly reduced their alcohol use and intentions to use substances relative to girls in the control group
Schwinn et al. 2010	Internet-based gender-specific drug abuse prevention program for adolescent girls	Girls ($n=236$) in the 7th, 8th, and 9th grades from 42 states and four Canadian provinces	Participants were randomly assigned to an intervention or control group. Measures were administered at pretest and posttest	Girls exposed to the Internet-based intervention reported lower rates of substance use and improved beliefs and self-efficacy
Schinke et al. 2004	Computer-based alcohol use prevention program	Young adolescents ($N=514$, mean age 11.5 years at recruitment)	Participants were randomly assigned to receive a CD-ROM intervention, a CD-ROM plus parent intervention, or no intervention. All youths completed pretest, posttest and three annual follow-up measurements	Over time, youths in all three groups reported increased use of alcohol, tobacco and marijuana; youths who received the interventions reported smaller increases than control youths
Schinke et al. 2009	Gender-specific intervention to reduce underage drinking among early adolescent girls	Adolescent girls and their mothers ($n=202$ dyads) from New York, New Jersey, and Connecticut	Participants were randomly assigned to intervention and control groups. Measures were administered at pretest, posttest, and follow-up	Mothers in the intervention group had improved mother–daughter communication skills and parental monitoring and rule-setting relative to girls' alcohol use relative to the control group. Girls in the intervention group had improved conflict management and alcohol use-refusal skills, healthier normative beliefs about drinking, and less alcohol use relative to girls in the control group

Table 4.1 (continued)

Author(s)	Description	Setting and population	Design	Outcomes
Vogl et al. 2009	A six-session computer-based curriculum that aims to reduce alcohol misuse and related harms in adolescents	Year 8 students ($n=1466$) from 16 high schools in Australia	Schools were assigned randomly to receive the computer-based prevention program ($n=611$, eight schools) or usual classes ($n=855$, eight schools). Measures were administered at baseline and follow-up	The computer-based prevention program was more effective than usual classes in increasing alcohol-related knowledge of facts; For girls, it was effective in decreasing average alcohol consumption, alcohol-related harms and the frequency of drinking to excess
Walters et al. 2007	Electronic Check-Up to Go (e-CHUG), a Web-based intervention for reducing drinking	Freshmen students ($n=106$) who reported heavy episodic drinking	Participants were randomly assigned to receive Web-based feedback about their drinking or to receive an assessment only	The feedback group showed a significant decrease in drinks per week relative to the control group
Williams et al. 2005	A CD-ROM-based intervention with interactive audio and video content to teach social resistance skills, general personal and social competence skills, and normative education	6th and 7th grade students ($n=123$) from 23 schools	Students were randomly assigned to either receive the CD-ROM preventive intervention ($n=61$) or to serve as a control group ($n=62$). Measures were completed at pretest and posttest	The intervention group participants reported significant improvement in prodrug attitudes, normative expectations for peer and adult substance use, anxiety reduction skills, and relaxation skills knowledge relative to control group students
Warren et al. 2006	keepin' it REAL, a ten-session curriculum including four video-based sessions promoting antidrug norms and skill building	Students ($n=4734$) in 25 middle schools in Arizona who participated in the original KiR study (Hecht et al.), received a version of the kiR intervention, and completed pretest and 14-month follow-up measures	Measures were completed at pretest and 14-month follow-up	Intervention group students who saw four or five videos engaged in less substance use in the past month than did students who saw fewer videos

in prodrug attitudes. They also demonstrated improved skills in anxiety reduction and relaxation.

The ASPIRE intervention aims to reduce smoking and prevent initiation of smoking among adolescents. It includes five CD-ROM-based lessons and a booster session. Youth participating in ASPIRE significantly reduced initiation of smoking and cigarette use in comparison to adolescents receiving standard health education (Prokhorov et al. 2008).

Although few interventions include a parenting component, the research points to advantages in involving parents in computer-based prevention. Schinke et al. (2004) evaluated a CD-ROM intervention with and without a parent involvement component to reduce risk of alcohol use among an urban sample of early adolescents. Community agencies were assigned randomly to receive the CD-ROM intervention, the CD-ROM plus parent intervention, or no intervention. Although all three groups reported increased use of alcohol, tobacco, and marijuana, youths who received the CD-ROM interventions reported smaller increases in substance use than those in the control group. Youths in the CD-ROM plus parent intervention experienced the largest decreases in alcohol use. Families were more likely to be involved in prevention efforts for these youth than for youths in the CD-ROM group or the control condition.

Similarly, girls participating in a computer-enhanced intervention with their mothers experienced improved mother–daughter communication skills, parental monitoring, and rule-setting pertaining to alcohol use. Girls in the intervention group also had less alcohol consumption, greater self-efficacy in avoiding alcohol use, and improved conflict management, in comparison to girls in the control group (Schinke et al. 2009, 2011). Taken together, these studies point to the benefits of involving parents in Web and computer-based substance abuse prevention efforts. Parental involvement has been shown to be effective in traditional prevention programs, as well.

A few studies suggested that computer-based interventions were ineffective or no more effective than standard interventions. One CD-ROM-based intervention designed to reduce smoking and risk for smoking among young adolescents resulted in no improvement in smoking behavior (Aveyard et al. 2001). "The Doubles," an intervention delivered through a set of DVDs, interactive CD-ROMs, workbooks, or a website had little effect on student attitudes about substance use (Epstein et al. 2007). Similarly, Maio et al. (2005) conducted a randomized trial of a computer-based substance abuse prevention program and found that intervention group participants experienced similar outcomes to those in the control group for binge drinking.

Web-Based and Web-Enhanced Technologies

Research on Web-based substance abuse prevention programs suggests that these are efficient and effective interventions. Most provide information to improve knowledge about substance use as well as interactive activities or videos that provide

opportunities for participants to practice skills. In general, Web-based prevention programs were found to be more effective with youth at higher risk for alcohol abuse (Bingham et al. 2011; Moore et al. 2005; Doumas and Andersen 2009; Neighbors et al. 2010).

Although many Web-based programs have been designed for college students, a few have effectively reduced or prevented substance use among younger adolescents (Newton et al. 2010; Rohrbach et al. 2010; Schwinn et al. 2010). Online interventions have reduced onset of alcohol use among young adolescents (Koning et al. 2011) and improved drug-related knowledge and attitudes toward drugs (Lord and D'Amante 2007). Web-based interventions have also demonstrated effectiveness in reducing smoking among young adolescents (Buller et al. 2008; Norman et al. 2008).

The CLIMATE intervention, described above as a CD-ROM-based intervention, has been delivered effectively online, as well. More specifically, participants receiving the intervention online were more likely to reduce alcohol use and binge drinking than youth in the comparison condition. They also improved their knowledge about alcohol and cannabis more than the comparison group participants (Newton et al. 2010).

As with the CD-ROM-based interventions, including a parenting component may enhance the effectiveness of Web-based interventions. Koning et al. (2011) compared a combined student and parent alcohol-use prevention program with student-only and parent-only versions, along with a control condition. They found that only students in the combined version of the intervention experienced significantly greater reductions in drinking, relative to students in the other groups.

Many other Web-based interventions have demonstrated effectiveness in preventing or reducing substance use among college students (Bingham et al. 2011; Kypri et al. 2004; Neighbors et al. 2010). Bersamin et al. (2007) examined the effectiveness of College Ale, a Web-based alcohol-misuse and harm-prevention course, with incoming college freshmen who reported alcohol use within past 30 days prior to the beginning of a new semester. Participation in College Ale reduced frequency of heavy drinking and negative alcohol-related consequences among freshmen who were regular drinkers.

For freshmen students who reported heavy drinking, Walters et al. (2007) found a significant decrease in drinking frequency among those who received feedback from a Web-based alcohol use assessment program called Electronic Check-Up to Go (e-CHUG). Doumas and Andersen (2009) replicated these findings in their evaluation of e-CHUG and demonstrated that the program effects were strongest for students at greater risk for alcohol abuse.

Using a Web-based intervention program with another group of incoming university students, Croom et al. (2009) studied the effectiveness of an alcohol education course, AlcoholEdu, with 3216 incoming first-year students at a private university. Participants in AlcoholEdu improved their alcohol-related knowledge but did not reduce alcohol use. In a study comparing e-CHUG, described above, and AlcoholEdu to a control group, only participants who received AlcoholEdu showed significantly reduced alcohol-related consequences (Hustad et al. 2010).

The findings described above related to e-CHUG demonstrate that, as with CD-ROM-based interventions, the research on Web-based interventions is, at times, ambiguous. Another intervention evaluated by Moore et al. (2005) found no significant differences on outcomes between an intervention delivered via the Internet and postal mail.

New Technologies for Training Facilitators

Video-based interventions are often designed to train program facilitators or teachers to implement prevention programs. For example, one study demonstrated that facilitators who were trained using videos, CD-ROM and the Internet report greater self-efficacy for obtaining and recommending prevention programs, as well as greater likelihood of implementing prevention programs to their constituents than participants who receive only written instructions (DiNoia et al. 2003).

Web-based approaches have also been used to improve teachers' perceived ease of knowledge delivery (Bishop et al. 2006) and help practitioners to integrate knowledge relevant to substance abuse prevention (Bishop et al. 2006). Hansen et al. (2009) conducted a randomized field trial comparing a Web-enhanced training to standard training. They found that Web-enhanced training for teachers implementing the prevention program, All Stars, reduced the time required to complete time-consuming tasks. Teachers receiving the Web-enhanced version of the training also reported the ability to deliver more of the program, although they also reported more modifications and omitted activities within sessions when compared to teachers who delivered the program as usual.

Discussion and Implications for Practice

The alarming gaps in access to substance abuse services, along with the costs of untreated substance abuse, present a compelling case for wider dissemination of effective prevention programs. However, the cost of providing prevention services to large populations has prohibited their broad implementation. Here, computer and Web-based approaches provide a cost-effective option for reaching more individuals, including those who have limited access to service providers.

The present review demonstrates that many computer and Web-based interventions have solid research support. However, there are limitations to some of the studies included here. Only a few of the interventions, such as keepin' it REAL and CLIMATE, have been evaluated in multiple research studies. Some studies were not able to employ random assignment to treatment conditions, raising concerns about the internal validity of the findings. In addition, most of the measures used in the studies rely on youths' self-report of attitudes and behaviors.

Although most of the studies included in this review demonstrated positive effects of electronic interventions, some evaluations indicate that computer and Web-based prevention have limited or no effects relative to interventions delivered using traditional methods (i.e., Aveyard et al. 2001; Epstein et al. 2007; Maio et al. 2005; Moore et al. 2005). Nevertheless, computer and Web-based interventions may still have advantages if they are more cost effective and yield similar results to standard interventions.

Notwithstanding the limitations in many of the studies presented here, the trends in research on computer and Web-based interventions parallel trends in research on traditional substance abuse prevention programs. Effective substance abuse prevention programs tend to share common characteristics, which include:

1. content on general life skills as well as skills related to substance use,
2. opportunities to practice newly learned skills,
3. emphasis on family, school, and community support,
4. emphasis on participant strengths rather than deficits, and
5. materials that are culturally relevant for the target population (Schinke et al. 2002).

The same characteristics tend to be shared by effective computer and Web-based interventions included in this review. These interventions are more likely to be effective if they are interactive, providing participants with opportunities to apply new skills. Programs that are flexible and allow for individualization of the curriculum are likely to be more successful because they can be tailored to the needs of each population. Here, video-based curricula may be at a disadvantage because the material cannot be modified. In contrast, Web-based programs can be flexible and provide the possibility of providing clients with feedback during the intervention.

Emerging technologies for prevention that have yet to be widely studied include virtual reality and gaming interventions. These programs enable participants to practice using refusal and drug resistance skills in simulated environments. Czuchry et al. (1999), for example, describe the Downward Spiral game that employs visual illustration of the dangers of continued substance abuse. The game resulted in increase intentions to limit alcohol consumption among students. Another prevention program uses virtual role-plays and a "choose your own adventure" format to develop skills in reducing prescription drug abuse (Schroeder 2006). Virtual reality-based skills training, combined with nicotine replacement therapy, has been used successfully for smoking cessation, as well (Bordnick et al. 2012).

As the options for computer and Web-based interventions grow, so does our capacity for providing prevention services to larger and more diverse groups. This is critical, as current economic conditions call for fewer service providers to serve larger populations. They are increasingly accountable for achieving outcomes quickly, due to pressures from funders, insurance providers, and managed care organizations. In this climate, social workers and other professionals who provide substance abuse prevention services will increasingly need to draw on these new technologies for accessing at-risk populations.

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Chapter 5
Using the Substance Abuse and Mental Health Services Administration (SAMHSA) Evidence-Based Practice Kits in Social Work Education

Laura Myers and John S. Wodarski

In today's social work climate, it is becoming increasingly important to provide social work students with practice knowledge on research-supported social work treatments and interventions. The Council on Social Work Education (CSWE) has placed a greater emphasis than ever on the importance of using research-based knowledge to inform and guide social work practice. In addition, the field itself has recognized the value of adhering to the evidence-based practice model in all facets of social work practice. Unfortunately, this twofold message is coming at a time when budgets are being cut and lack of resources is becoming the norm. Bellamy et al. (2013) state "Evidence-based practice is reflected in social work publications, accreditation standards, research and funding opportunities. However, implementing EBP in social work practice and education has proven challenging, highlighting the need for additional resources" (p. 426).

It is at this juncture when social work educators are expected, with ever-diminishing resources, to offer training in evidence-based practice and research-supported interventions to social work students and practitioners. The substance abuse and mental health services administration (SAMHSA) has developed a series of practice kits on a variety of research-supported treatment programs. The SAMHSA evidence-based practice (EBP) kits were launched in 1996 by the Robert Wood Johnson Foundation. The goal was to identify treatments and practices that were supported by multiple research studies. Initially six treatments were identified and kits were developed for: (1) Illness management and recovery; (2) Supported employment; (3) Family psychoeducation; (4) Assertive community treatment; (5) Integrated treatment for co-occurring disorders; and (6) Medication treatment, evaluation, and management. Four additional treatment programs have since been

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identified and corresponding kits have been developed: (1) Consumer-operated services; (2) Interventions for disruptive behavior disorders; (3) Permanent supportive housing; and (4) Treatment of depression in older adults.

These kits provide a wealth of information regarding the development, implementation, and evaluation of each of these programs. They can be used by social work educators in the classroom and in continuing education workshops at no charge to the students or to the university or agency presenting the materials. Social work practitioners, faculty, and students can either download the materials directly to their computers or they can order CDs of many of the materials to be delivered by mail. Before we review the SAMHSA kits, let us look a little more closely at the views being expressed by the CSWE and other selected leaders in the field of social work education regarding the importance of providing social work students and practitioners with training in evidence-based practice and research-supported interventions.

CSWE EPAS Supports Teaching Research-Supported Practice

In their current Educational Policy and Accreditation Standards (EPAS; Council on Social Work Education 2008), there is a strong emphasis being placed by CSWE on teaching research-based knowledge and using research to inform practice. In the 2008 EPAS, the Educational Policy 2.1.3 and the corresponding core competency states that social workers:

- distinguish, appraise, and integrate multiple sources of knowledge, including research-based knowledge, and practice wisdom;
- analyze models of assessment, prevention, intervention, and evaluation.

Educational Policy 2.1.6 states:

> Social workers use practice experience to inform research, employ evidence-based interventions, evaluate their own practice, and use research findings to improve practice, policy, and social service delivery. Social workers comprehend quantitative and qualitative research and understand scientific and ethical approaches to building knowledge. (p. 5)

Finally, Educational Policy 2.1.10 states:

> Practice knowledge includes identifying, analyzing, and implementing evidence-based interventions designed to achieve client goals; using research and technological advances; evaluating program outcomes and practice effectiveness; developing, analyzing, advocating, and providing leadership for policies and services; and promoting social and economic justice (pp. 6–7).

It is clear that CSWE is challenging social work educators to prepare social work students for practice in a field that differs significantly from a field in which practitioners solely rely on the wisdom of colleagues, agency traditions, and the authority of experts. The challenge for educators is how best to provide not only the knowledge our students need but also the desire for the life-long learning that this

type of social work practice will require. Gambrill (2006) encouraged social work educators to stress EBP in order to "(a) move away from authority-based decision making in which appeals are made to tradition, consensus, popularity, and status, (b) honor ethical obligations to clients, such as informed consent, (c) make practices, policies, and their outcomes transparent, (d) attend to application problems, that is, encourage a systemic approach to improving services, and (e) maximize knowledge flow—encourage honest brokering of knowledge and share ignorance and uncertainty as well as knowledge" (p. 341).

Despite the clear direction taken by CSWE, schools of social work around the country often still fail to highlight the research-supported interventions in the classroom (Rubin 2010; Rubin and Parrish 2007). Research has shown that social work practitioners "rarely utilize research studies to guide their practice" (Rubin 2010, p. 64). Some opponents to this new trend claim that there are very few research-supported interventions that are appropriate in the social work field. Despite these claims, there are a growing number of research-supported social work interventions that are available to social workers.

The Campbell Collaboration and the Cochrane Collaboration are two available sources for finding information on research-supported interventions. The Campbell Collaboration (2012) is "an international research network that produces systematic reviews of the effects of social interventions" whose mission is to "help people make well-informed decisions by preparing, maintaining, and disseminating systematic reviews in education, crime and justice, and social welfare." They offer a detailed description of systematic review and have specific guidelines for reviews that are included in their database. They define the purpose of a systematic review "to sum up the best available research on a specific question." In addition, the systematic review must use "transparent procedures to find, evaluate, and synthesize the results of relevant research." In order to minimize bias, these procedures must be "explicitly defined in advance, in order to ensure that the exercise is transparent and can be replicated."

The Cochrane Collaboration (2012) is an organization whose goal is to "help health care providers, policy-makers, patients, their advocates and carers, make well-informed decisions about health care, based on the best available research evidence, by preparing, updating and promoting the accessibility of Cochrane Reviews." They define evidence-based medicine as the integration of individual clinical expertise and patient values and expectations with the best available clinical evidence from systematic research. In an effort to make this systematic research available to clinicians, they have published online over 5000 reviews in The Cochrane Library. They define systematic review as "a high-level overview of primary research on a particular research question that tries to identify, select, synthesize and appraise all high quality research evidence relevant to that question in order to answer it."

While there may not be substantial evidence on every problem area that social workers confront in their practice, there is evidence available in many of these areas. For this reason, CSWE is correct in calling for social work educators to add evidence-based practice as an important component of the education of our future

educators. Rubin (2010) argues that by "engaging in the EBP process, future prac-titioners can have the peace of mind of knowing that they have acted professionally by ensuring that they have adequately searched for the best intervention for their client even if that search comes up empty" (p. 70).

Emphasis in Social Work Field on Evidence-Based Practice

Another reason for utilizing SAMHSA's EBP kits in the classroom is based on the field's current emphasis on evidence-based practice. Before we look more closely at SAMHSA's EBP kits and the benefits of utilizing these kits in the social work classroom, it is important to clarify the term, "evidence-based practice." Having chosen this phrase to identify their kits, SAMHSA has unfortunately added to the confusion that already exists regarding what this term actually means. The original definition of EBP, developed by Sackett et al. (1997) in the field of medicine reads, "the conscientious, explicit, and judicious use of the best available scientific evi-dence in making decisions about the care of individual patients" (p. 2). This requires that social workers, first, must be able to identify what the current best evidence is and then, must use this knowledge to best care for their clients.

Today, some social workers equate evidence-based practice with the practice of selecting and utilizing interventions and treatments that are research-based, while others see this as only one important component of a broader practice philosophy. Rubin (2007) points out that the definition of EBP remains somewhat elusive be-cause some define it as a process while others define an intervention as evidence-based when it has been deemed such by experts who have reviewed and appraised the evidence. The author goes on to define the process of evidence-based practice as a process that "emphasizes five phases in which practitioners formulate an EBP question, search for studies providing evidence about that question, critically ap-praise the evidence, select and implement a intervention that is supported by the best evidence, and then monitor client progress" (Rubin 2007, p. 541).

Since many social workers consider the term "evidence-based practice" to refer not to a specific treatment, but to a model of practice, the education of social work students must extend beyond simply locating and utilizing research-supported inter-ventions. Social work education must include searching the literature for research-supported treatments but it also involves a series of other steps, such as the consid-eration of client needs and preferences, available resources, and staff qualifications, as well as the evaluation of the treatment once it is selected and implemented. The SAMHSA EBP kits provide detailed information on these research-supported inter-ventions and also include discussions in each kit regarding client needs, resources, staff qualifications, and evaluation.

Although the toolkits include a great deal of information to help social work practitioners become evidence-based practitioners, the present authors believe it is an error for these programs to be identified as *evidence-based practice* kits. Call-ing a detailed description of a specific treatment, even one that is supported by

research evidence, an evidence-based practice may add confusion to the issue of using evidence-based practice as a philosophy of practice. While SAMHSA certainly deserves credit for doing an extremely thorough job of providing the research evidence supporting each of these treatments, a more accurate and less confusing term to describe these kits might be research-supported or empirically-supported treatment kits. In this chapter, the term "evidence-based practice" refers to the philosophy of practice and the term "research-supported interventions" refers to individuals interventions that have shown, through research, to be effective in helping clients (Thyer and Myers 2011; Thyer and Pignotti 2011).

There is significant movement in the field of social work practice toward the use of evidence-based practice as a philosophy of practice, which includes the selection and utilization of research-supported interventions. Rubin (2010) points out that as early as 1917, Mary Richmond was already acknowledging the importance of using research to guide practice. Rubin and Parrish (2007) cite two key reasons why the EBP movement has gained momentum during the last decade: (1) the internet makes it easier to retrieve research studies electronically; and (2) the proliferation of meta-analyses and systematic reviews. This has greatly enhanced the social worker's ability to find and evaluate which interventions have the greatest empirical support.

One of the components of evidence-based practice is having an awareness and knowledge of the research-supported treatments that are available. There is no reason why every social work educator should reinvent the wheel when it comes to providing our students with practice knowledge on research-supported treatments. SAMHSA has already spent a great deal of time and money developing these kits in order to share this knowledge with social work educators and practitioners. Each kit contains a wealth of information that is applicable not only to the research-supported treatment program specifically described in the kit but also to more general problems social workers face in their practice. For example, the Assertive Community Treatment kit discusses the issue of working with clients who have chosen to participate in the treatment program as an alternative to incarceration, and ways to ensure that treatment is not viewed as coercive by the client. Problems created when clients are in a situation where they may feel coerced have been widely discussed in the social work literature, and the practical suggestions offered in this kit can help the social work student prepare for this situation in a variety of practice settings.

Overview of SAMHSA Toolkits

All of the kits start with sections on *How to Use the EBP Kit* and *Getting Started with EBPs* that offer suggestions for establishing these programs, including creating vision and building community support, creating an advisory board, establishing program standards, assessing financial needs and identifying funding sources, assessing training needs and building a training structure, monitoring program fidelity and outcomes, and maximizing the cultural competence of the program staff and

administrators. The kits follow with the following modules that are tailored for the individual programs: *Building your Program, Training Frontline Staff, Evaluating your Program, The Evidence*, and *Using Multimedia*. In addition, the kits include brochures (English and Spanish versions), PowerPoint presentations that can be used to introduce the program, and some include videos that be used in training sessions. Each of the kits offers a great deal of practice wisdom that has been gleaned from practitioners that have already developed and implemented these programs as well as research-based knowledge that stems from the evaluation of these programs.

Illness Management and Recovery

The primary aim of Illness Management and Recovery (IMR; Substance Abuse and Mental Health Services Administration 2010a) is to "empower consumers to manage their illnesses, find their own goals for recovery, and make informed decisions about their treatment by teaching them the necessary knowledge and skills" (*Building your Program*, p. 1). IMR is appropriate for consumers who experience symptoms of schizophrenia, bi-polar disorder, and depression. The core components of the program include: (1) psychoeducation; (2) behavior tailoring for medication management; (3) relapse prevention; and (4) coping skills training.

The kit starts with information on how to gain the support necessary from the stakeholders who could potentially benefit from the program. Initial steps include establishing program goals and standards, addressing financial issues, forming an advisory board, and determining what staff will be needed. The next step is to determine the structure of the program, including such decisions as whether a group or individual format will be used, where sessions will be held, and the length and structure of each session. The 10 core topics that are covered in the IMR program include recovery strategies, facts about mental illness, the stress-vulnerability model and treatment strategies, building social supports, using medication effectively, drug and alcohol use, reducing relapses, coping with stress, coping with persistent symptoms, and getting your needs met by the mental health system. Handouts that include each of these topics, are available to the consumer. Helpful forms are provided in the kit, such as a *Strengths and Knowledge Inventory* and an *IMR Progress Notes* form.

Training includes basic training for all key stakeholders, including agency staff, consumers, families, mental health authorities, and other community leaders, as well as intensive training for the IMR leader and practitioners. The training unit consists of four modules: (1) *basic elements and core values*; (2) *core processes*; (3) *recovery and the stress-vulnerability model*; and (4) *motivational, educational, and cognitive-behavioral strategies*. Each module includes notes to the facilitator to help prepare for the training, reading materials, a video, and exercises. The training helps the practitioners better understand mental illness as well as offers detailed instructions on how to lead either individual or group sessions with IMR consumers, including what topics to cover, agendas for each sessions, and suggested homework assignments.

The kit offers an *IMR Fidelity Scale* that may be used to measure how well the program follows the key elements of the research-based model and a *General Organizational Index* for process evaluation, along with detailed protocol for using these two instruments. To aid in the outcome evaluation, the kit provides instructions on how to access and use a computer package, called the *Consumer Outcomes Monitoring Package*, as well as an *Outcome Reports Form*, which provides a simple way to collect participation and outcome data. A review of the literature suggests that IMR programs have been effective with clients of varying races and ethnicities in both urban and rural environments, and in outpatient and inpatient mental health settings. In addition, consumers that participate in IMR programs: (1) know more about mental illnesses; (2) have reduced relapses and hospitalizations; (3) have reduced distress from symptoms; and (4) used their medications more consistently (Mueser et al. 2002).

Supported Employment

Supported employment (SE; Substance Abuse and Mental Health Services Administration 2010b) is an "approach to vocational rehabilitation for people with serious mental illness that emphasizes helping them obtain competitive work in the community and providing the supports necessary to ensure their success in the workplace" (*Building your Program*, p. 3). SE de-emphasizes prevocational training and jobs that are designated specifically for people with disabilities. The goal of SE is to start a job search within 1 month after the client starts the program, looking only at the jobs that pay at least minimum wage and are available to everyone regardless of their disability status. A review of 17 outcome studies demonstrated that 58 % of clients in SE programs found competitive employment compared to 21 % of clients in traditional employment programs (Bond et al. 2001a).

The kit starts with information on how to gain the support necessary from the stakeholders who could potentially benefit from the program, including public mental health authorities, agency administrators and practitioners, local business people, and the consumers and their families. From there, it provides a detailed description of how to implement the program, including articulating the goals of SE, forming advisory groups, establishing program standards, addressing financial issues, developing a training structure, and monitoring the process and outcomes of the program.

Each module is full of helpful, practical suggestions. For example, the kit provides a list of possible funding sources, example position descriptions for SE leaders and SE specialists, suggested staff to consumer ratio, and example referral and vocational profile forms. It warns against possible problems or concerns that may arise, such as consumers being concerned about losing their disability benefits and offers suggestions for addressing these concerns. It offers websites throughout where you can find additional information.

The training unit consists of four modules for training various stakeholders: (1) *basic elements and practice principles*; (2) *referral, engagement, and benefits*

counseling; (3) *assessment and job finding*; and (4) *job supports and collaboration*. Each module includes exercises that can be used in the training environment. The evaluation unit suggests methods for assessing: (1) whether or not the program is being carried out as planned (process evaluation); and (2) whether or not the desired goals of the program were reached (outcome evaluation). The kit offers an *SE Fidelity Scale* and a *General Organizational Index* for process evaluation. The goals of the program are for the consumers to obtain competitive work, earn higher wages, work more hours, show improved symptoms, show improved self-esteem, and express satisfaction with their finances after participating in the program. The *Consumer Outcomes Monitoring Package* allows agencies to monitor and report on outcomes related to the SE program. A review of the literature is included that describes many research articles that describe and evaluate SE programs around the country.

Family Psychoeducation

Family Psychoeducation (FPE; Substance Abuse and Mental Health Services Administration 2010c) is an "approach for partnering with consumers and families to treat serious mental illnesses" (*Building your Program*, p. 1). The goal is for practitioners, consumers, and families to work together to support recovery. Different formats of FPE are utilized, including multi-family versus single-family treatment, duration and location of sessions, and level of participation of the consumer. Effective FPE models include the following components: (1) education about mental illness; (2) information resources; (3) skills training and guidance about managing mental illness; (4) problem solving; and (5) social and emotional support. Services are divided into three consecutive phases: (1) Joining phase; (2) Educational workshop; and (3) Ongoing FPE sessions.

Initial steps include establishing program goals and standards, addressing financial issues, forming an advisory board, and determining what staff will be needed. Practical concerns, such as the issue of consumer willingness to participate in the program and finding supportive family members who are willing to participate, comparing the cost of implementing an FPE program to the cost of hospitalization, and financial reimbursement for FPE services, are addressed early in the kit. Establishing program procedures, such as staff criteria, referral procedures, and admission and discharge criteria, are discussed in the section, *Tips for Administrators and Coordinators*. Forms for documenting detailed progress notes on the three joining phase sessions, the 1-day educational workshop, and the ongoing multi-family sessions are included.

Training includes basic training for all key stakeholders, including agency staff, consumers, families, and mental health authorities, as well as intensive training for the FPE leader and practitioners. The training unit consists of five modules: (1) *Basic elements and practice principles*; (2) *Core processes of family psychoeducation*; (3) *Joining sessions and educational workshops*; (4) *Ongoing family*

psychoeducation workshops; and (5) *Problem solutions from actual practice*. Each module includes notes to the FPE coordinator to help prepare for the training, reading materials, exercises, and videos. The training covers all of the core principles and procedures of the FPE program, as well as detailed instructions on implementing each phase of the program, including example agendas for the three joining sessions, the educational workshop, and the ongoing family sessions. A list of common problem areas is offered along with a problem-solving strategy for facing these concerns with consumers and their families.

The kit offers an *FPE Fidelity Scale* and a *General Organizational Index* that measure how well the program follows the key elements of the research-based model. To aid in the outcome evaluation, the kit provides instructions on how to use the *Consumer Outcomes Monitoring Package* as well as an *Outcome Reports Form*. Research has shown that families that participated in FPE programs showed reduced relapses and rehospitalizations, improved family well-being, reported greater knowledge of mental illnesses, showed a decrease in confusion, stress, and isolation, and reported reduced medical care and use of medical care (Dixon and Lehman 1995; Dixon et al. 2001; Dyke et al. 2002). The greatest amount of research has looked at the effectiveness of FPE with consumers with schizophrenic disorders, with promising results with bipolar disorder, major depression, obsessive–compulsive disorder, and borderline personality disorder (Dixon et al. 2001).

Assertive Community Treatment

Assertive Community Treatment (ACT; Substance Abuse and Mental Health Services Administration 2008a) is "a service delivery model, not a case management program" (*Building your Program*, p. 5). ACT serves consumers with the most serious psychiatric symptoms, who often have extensive histories of hospitalizations, are homeless, have co-occurring substance-abuse or medical problems, and are involved in the criminal justice system. ACT programs are characterized by: (1) a team approach—multiple professionals work together to provide services; (2) in vivo services—services are offered where needed; (3) small caseloads—10–12 staff members serve about 100 consumers; (4) time-unlimited services—service is provided as long as needed; (5) shared caseload—the entire team provides services as needed; (6) flexible service delivery—services are adjusted quickly to respond to changes in consumers' needs; (7) fixed point of responsibility—if other services are needed, the team ensures that they are received; and (8) 24/7 crisis availability—services are always available. Core ACT services include crisis assessment and intervention, comprehensive assessment, illness management and recovery skills, individual supportive therapy, substance-abuse treatment, employment support, daily living assistance, intervention with support networks, support services (medical, housing, benefits, transportation), case management, and medication administration and monitoring.

As in all of the kits, the ACT kit starts with information on creating a vision, developing an advisory board, establishing program standards, and addressing budgeting issues. Practical concerns, such as admission and discharge standards, design of the ACT office, and hours of operation, are addressed. ACT staff members include the ACT leader, a psychiatrist, psychiatric nurses, employment specialists, substance abuse specialists, mental health professionals, peer specialists (consumers who have utilized mental health services), and a program assistant. Since the ACT program offers 24-hour a day services and monitoring, the practitioner is given suggestions on how to ensure the treatment is not perceived by the consumer as coercive. The kit includes a discussion of ACT programs that have been used in conjunction with the criminal justice system as an alternative to incarceration as well as interviews with three administrators who have designed and implemented an ACT program (*Building your Program*, p. 47–69).

The training unit consists of four modules: (1) *basic elements of ACT*; (2) *recovery and the stress-vulnerability model*; (3) *core processes of ACT*; and (4) *service areas of ACT*. Each module includes notes to the facilitator to help prepare for the training, reading materials, a video, and exercises. The kit offers an *IMR Fidelity Scale* and a *General Organizational Index* for process evaluation, and the *Consumer Outcomes Monitoring Package* and an *Outcome Reports Form for* collecting participation and outcome data. Research has shown that ACT programs: (1) greatly reduce hospitalizations; (2) increase housing stability; (3) lead to better substance-abuse outcomes; (4) yield higher rates of competitive employment; and (5) are more satisfying to consumers and their families than alternative treatments (Phillips et al. 2001). The program has been endorsed not only by SAMSHA but also by the US Department of Health and Human Services and the National Alliance on Mental Illness. Research suggests that the ACT program is cost-effective when the model is closely followed, and costs are offset by the reduced hospitalizations experienced by the consumers (Bond et al. 2001b; Essock et al. 1998).

Integrated Treatment for Co-occurring Disorders

Practitioners in an integrated treatment (IT; Substance Abuse and Mental Health Services Administration 2010d) program "develop integrated treatment plans and treat both serious mental illnesses and substance use disorders so that consumers do not get lost, excluded, or confused going back and forth between different mental health and substance abuse programs" (*Building your Program*, p. 1). The goal of the IT model is to support consumers in their recovery process, which includes: (1) abstaining from substance use; (2) controlling symptoms; (3) complying with mental health treatment; and (4) learning to move beyond mental illness so they can pursue a personally meaningful life. As the name suggests, the treatment for the mental illness and the substance use disorder are integrated, include motivational interventions, cognitive–behavioral treatments, and medication services, and can be offered in an individual, group, self-help, or family format.

The kit starts with suggestions for creating a vision, forming an advisory board, establishing program standards, addressing financial issues, developing a training structure, and evaluating the program. Practical items, such as staff position descriptions, detailed descriptions of policies and procedures, example *Integrated Treatment Referral Form*, three assessment forms, and an *Integrated Treatment Plan* form, are included as well. The kit offers information on another excellent resource for working with this population, *Substance Abuse Treatment for Persons with Co-occurring Disorders: A Treatment Improvement Protocol* (*TIP 42*), which is also produced by Substance Abuse and Mental Health Services Administration (2008b). TIP 42 offers professionals who provide substance abuse treatment advances in treatment for people with co-occurring mental disorders.

Training includes basic training for all key stakeholders, including agency staff, consumers, families, mental health authorities, and other community leaders, as well as intensive training for IT leaders and practitioners. The training unit consists of five modules: (1) *basic elements and practice principles*; (2) *practice knowledge of common substances*; (3) *stages of treatment and core processes*; (4) *practical skills for integrated treatment*; and (5) *service formats*. Training focuses on teaching IT specialists about substance abuse and the basic skills needed to help consumers recover from both mental illness and substance abuse. Each module includes helpful notes to the facilitator to help prepare and implement the training. Module 2 offers detailed information on alcohol, cannabis, stimulants, and opiates, including short and long-term effects, withdrawal issues, and available treatments, along with a section on the risk and effects of infectious diseases. Module 3 includes detailed instructions for screening and assessing potential consumers, along with the steps involved in developing a treatment plan. Module 4 includes practical treatment knowledge, such as developing action plans to help consumers reach individual goals, social skills training, motivational techniques, cognitive and behavioral therapy techniques, and relapse prevention interventions. Module 5 presents the various formats that are used in IT, including individual therapy, self-help and 12-step groups, and family interventions.

The kit offers an *IT Fidelity Scale* and a *General Organizational Index* for process evaluation, and the *Consumer Outcomes Monitoring Package* and an *Outcome Reports Form* for collecting participation and outcome data. Research has shown that IT programs are associated with the following positive outcomes: (1) reduced substance use; (2) improvement in psychiatric symptoms and functioning; (3) decreased hospitalization; (4) increased housing stability; (5) fewer arrests; and (6) improved quality of life (Drake et al. 2001).

Medication Treatment, Evaluation, and Management

Medication treatment, evaluation, and management (MedTEAM; Substance Abuse and Mental Health Services Administration 2010e) is an approach for "offering medication management to people with serious mental illnesses" (*Building your*

Program, p. 1). The MedTEAM approach does not dictate what medications to prescribe, but rather emphasizes that the decision must be shared between the consumer and the treatment team based on clinical expertise and personal experience. The practice principles of MedTEAM include: (1) medication decisions are guided by the latest scientific evidence; (2) medication management requires a team approach; (3) systematically assessing medication-related outcomes is key to evaluating clinical progress; (4) high-quality documentation provides a record of medication response over a consumer's lifetime; and (5) consumers and medication prescribers share in the decision-making process.

The initial steps for building a MedTEAM program include creating a vision that articulates the MedTEAM principles and goals, forming an advisory board, establishing program goals and standards, and developing a training structure and a plan for evaluating the program. It is important to establish collaborative relationships with outside organizations, such as psychiatric hospitals, emergency rooms in general hospitals, general medical providers, and mental health specialists, in order to promote sharing of information regarding consumers and their medication needs. A sample *Admissions Form* is offered to gather the information needed on each new consumer, including a personal and family history of psychiatric disorders, past and current psychiatric and nonpsychiatric medication history, and current mental status evaluation. A sample *Ongoing Treatment Plan Form* gathers current information, including diagnoses, medications, and progress notes, throughout the consumer's involvement in the program.

Basic training for all agency staff, consumers, families, mental health authorities, and members of the advisory board can be offered using an introductory PowerPoint presentation, a brochure, and an introductory video. More intensive training for the MedTEAM leader and practitioners consists of three modules: (1) *new documentation practices*; (2) *ongoing training on medications*; and (3) *integrating outcome measures into clinical assessments*. Module 1 focuses on methods for documenting the information needed to make informed medication decisions. Module 2 offers suggestions on ways MedTEAM practitioners can stay current on the scientific evidence related to medication management. It discusses how to use websites, search engines, and literature reviews, and warns against the reliability of some internet sources regarding medications. Module 3 discusses how to assess clinical outcomes to determine if medications are having the desired effect.

The kit offers a *Fidelity Scale* and a *General Organizational Index* for process evaluation, and the *Consumer Outcomes Monitoring Package* and an *Outcome Reports Form* to collect participation and outcome data. It also provides detailed instructions and forms for conducting a thorough chart review to ensure that the MedTEAM model is being followed by each MedTEAM specialist. Research has shown that the MedTEAM approach leads to: (1) fewer mental health symptoms; (2) improved quality of care; (3) increased retention of employment; and (4) increased satisfaction with treatment (Simon et al. 2000; Wells et al. 2000; Worrall et al. 1999).

Consumer-Operated Services

Consumer-Operated Services (COS; Substance Abuse and Mental Health Services Administration 2011a) are "peer-run service programs that are owned, administratively controlled, and operated by mental health consumers and emphasize self-help as their operational approach" (*Building your Program*, p. 1). Using COS allows the consumer to see that recovery is possible because they see it in the people involved in the program. Consumer-operated means the services are: (1) independent—administratively controlled and operated by the consumers; (2) autonomous—all operational and administrative decisions are made by the program; (3) accountable—responsibility for all decisions rests with the program; (4) consumer-controlled—at least 51 % of board are mental health consumers; and (5) peer workers—staff and management are individuals who have received mental health services. Services offered through COS might include peer counseling, help with housing, employment and education, social and recreational opportunities, support groups, crisis response and respite, and community outreach.

The kit starts with suggestions on how to establish a COS program, including tips for building support for the program, developing program policies and procedures, and assessing training needs. It offers a list of consumer benefits, such as well-being, recovery, and empowerment; a list of mental health agency benefits, such as economic value, enriched service choice, expanded availability and access, and reaching underserved populations; and a list of benefits to the greater community. Tables describe the optimal structure, environment, belief systems, peer support, educational programs, and advocacy for a COS program that would obtain a perfect score on a program fidelity scale (*Building your Program*, pp. 19–21). Information on a variety of grant sources that may help fund COS is offered, along with tips for addressing performance problems. Practical suggestions for the COS leader include basic steps for applying for and obtaining tax-exempt nonprofit organization status, tips for building a board of directors, and hiring and employment policies.

The training unit consists of six modules: (1) *belief systems*; (2) *environment*; (3) *peer support*; (4) *education*; (5) *leadership*; and (6) *advocacy*. It offers a resource for program leaders to train COS volunteers and workers. Modules include detailed discussions of each topic, along with group exercises, role plays for practicing and developing skills, individual exercises involving written responses, group discussions, and thought-provoking questions for readers. The kit offers a fidelity assessment that measures how well the program follows the key elements of the COS model.

To aid in the outcome evaluation, the kit provides suggestions for commonly used evaluation protocols. It suggests that the *Peer Outcomes Protocol* (*POP*) may be the most useful evaluation tool. The tool was developed by consumers to ensure that consumer values were included in the evaluation outcomes. The POP includes seven independent modules: (1) *Demographics*; (2) *Service use*; (3) *Employment*; (4) *Community life*; (5) *Quality of life*; (6) *Well-being*; and (7) *Program satisfaction*. The evaluation module offers a literature review of the principles and philosophy of

consumer-operated services as well as the outcome research from the many different types of consumer-operated programs.

Permanent Supportive Housing

Permanent supportive housing (PSH; Substance Abuse and Mental Health Services Administration 2010f) is a program that assists consumers who have psychiatric disabilities to find and keep adequate housing. As the name implies, PSH is: (1) *Permanent*—tenants may live in their homes as long as they meet basic obligations, such as paying rent; (2) *Supportive*—tenants have access to the support services they want and need to help them retain their housing; and (3) *Housing*—tenants have a secure and private place to call home, with the same rights and responsibilities of other members of the community (*Building your Program*, p. 1). PSH offers an alternative to housing options that segregate people based on their disability. The program supports the following critical elements: (1) tenants must hold a lease or in some cases, a sublease, with full rights of tenancy; (2) leases do not contain any provisions that would not be in a lease held by someone without a psychiatric disability; (3) participation in support services is voluntary and tenants cannot be evicted for rejecting services; (4) house rules, if any, are no different than those for tenants without a psychiatric disability; (5) housing is not transitional or temporary and can be renewed as long as basic obligations are met; (6) tenants are offered the same range of options as other people in their income range and housing market; (7) housing is affordable with tenants paying no more than 30% of their income toward rent and utilities; (8) housing is integrated; (9) tenants have a choice in the support services they receive and services can change as tenants needs change (*Building your Program*, pp. 2–4).

The kit starts with suggestions for identifying key stakeholders and building support, establishing program standards and procedures, addressing financial issues, developing a training structure, maximizing cultural competence, and evaluating the program. Typical approaches to PSH include: (1) project-based rental assistance—housing subsidies are tied to a particular unit and consumers pay reduced rent; (2) sponsor-based rental assistance—nonprofit agencies buy or lease housing, and then lease to consumers; (3) tenant-based rental assistance—tenants receive vouchers that entitle them to a reduced rent. These three strategies can be used in either (1) single-site housing in which tenants live together in a single building or a complex of buildings or (2) scattered-site housing in which tenants receive support services but live throughout the community. In addition to housing assistance, a wide array of other support services may be provided, such as services to help consumers maintain housing, independent living skills, recovery-focused services, community integration services, mental health and substance abuse services, health and medical services, employment services, and family services. Other information, such as funding sources, details on the housing rights of people with disabilities, job descriptions and responsibilities for PSH staff, and hints on how to evaluate your

local housing market and work with individual landlords, is offered throughout the kit. It also includes a separate handbook for the tenant/consumer.

The training unit consists of six modules: (1) *Core Elements of PSH*; (2) *Outreach and Engagement*; (3) *Helping People Find and Acquire Housing*; (4) *Connecting Tenants to Benefits and Community-Based Services*; (5) *Directly Providing Supports for Housing Retention*; and (6) *Addressing Additional Special Needs*. The evaluation module offers suggestions and forms for conducting process evaluations and minimal guidance for conducting outcome evaluation. The evidence module offers an overview of current research on PSH programs.

Treatment of Depression in Older Adults

The Evidence-Based Practice (EBT) kit for the treatment of depression in older adults (Substance Abuse and Mental Health Services Administration 2011b) provides information on service approaches and evidence-based treatments that have been used to improve outcomes for this population. The term, "older adults with depression," refers to adults aged 65 years or older who have major depression, minor depression, or dysthymia. Since older adults with depression often need a combination of mental health, aging, and medical health services, this model encourages collaboration among agencies and practitioners who provide these services. It emphasizes that depression is not a normal part of aging, and can impair an individual's ability to function independently, contribute to poor health outcomes, cause family disruptions, and generally inhibit an older person's ability to achieve successful aging.

The *Key Issues* module includes a discussion of the diagnostic criteria and risk factors for major depression, minor depression, and dysthymia. It also points out the difficulties in diagnosing these disabilities in older adults, such as the overlap of symptoms between depression and some physical health disorders often found among older adults. Physical health problems, such as chronic pain, limited mobility, stroke, hip fracture, cancer, arthritis, hearing and vision loss, and heart attack, make older adults more susceptible to depression. In turn, depression can increase the risk of further medical issues and can complicate recovery. Other factors, such as reduced financial and social supports, also increase the risk of depression.

The *Selecting EBPs* module describes the interventions that are supported by research, and offers information on how to find manuals for providing each of these interventions. The following are the evidenced-based psychotherapy interventions that have been shown to successfully help older adults with depression, along with references to manual(s) for each intervention: cognitive-behavioral therapy (Beck 1995; Beck et al. 1979; Gallagher-Thompson et al. 2008; Laidlaw et al. 2003; Thompson et al. 2002; Wright et al. 2006); behavioral therapy (Gallagher 1981; Lewinsohn 1974; Lewinsohn et al. 1976; Teri and Lewinsohn 1982; Zeiss and Lewinsohn 1986), problem-solving treatment (Nezu et al. 1989); interpersonal psychotherapy (Hinrichsen 2006; Klerman and Weissman 1993; Miller 2009; Weissman et al. 2007); reminiscence therapy (Birren and Deutchman 1991;

Butler 1963); and cognitive bibliotherapy (Burns 1980, 1990). Other research-supported treatments include: anti-depressant medications; multidisciplinary geriatric outreach services, including *Psychogeriatric Assessment and Treatment in City Housing* (*PATCH*; Robbins et al. 2000) and *Program to Encourage Active, Rewarding Lives for Seniors* (*PEARLS*; University of Washington Health Promotion Research Center 2007); and collaborative mental and physical health care, including *Improving Mood, Promoting Access to Collaborative Treatment* (*IMPACT*; Unutzer et al. 2004) and *Prevention of Suicide in Primary Care Elderly: Collaborative Trial* (*PROSPECT*; Mulsant et al. 2004).

The kit discusses issues involved in selecting which of these treatments to implement, both at the agency level as well as for individual clients. A table is included that displays the different EBTs for depression along with the type(s) of depression for which studies have been conducted, outcomes affected, service delivery settings, timeframe of sessions, and practitioner qualifications, all extremely helpful in determining which treatment can best be implemented with the available needs and resources (*Selecting EBTs for Treatment of Depression*, pp. 8–9). Detailed descriptions of the EBTs include: (1) description of the intervention; (2) practitioner qualifications; (3) disorders addressed; (4) available evidence; (5) settings that have been evaluated; (6) populations included in research; (7) training and resources available (including therapist and client manuals); (8) key issues related to implementation; and (9) program contact information. More detailed implementation descriptions are provided for the programs PATCH and IMPACT. The kit offers a guide for the elderly consumer, family members, and caregivers, one for the practitioner working with this population, and one for agency administrators, as well as a leadership guide for mental health, aging, and medical health authorities.

Interventions for Disruptive Behavior Disorders

Disruptive behavior disorders (DBD; Substance Abuse and Mental Health Services Administration 2011c) include the diagnoses of Oppositional defiant disorder (ODD) and Conduct disorder (CD). DBDs "occur across the stages of child and youth development; have a significant impact on a child's functioning across many social settings (i.e., home, school, community, etc.); involve multiple service sectors (i.e., mental health, education, child welfare, juvenile justice, etc.); and can result in great social costs to communities when untreated" (*How to Use the EBP Kits*, p. 4). Research-supported prevention models include Triple P (Positive parenting program; www.triplep-america.com), Project ACHIEVE (Killian et al. 2007; Knoff and Batsche 1995), Second Step (www.cfchildren.org/second-step), Promoting Alternative Thinking Strategies (PATHS; www.prevention.psu.edu/projects/PATHSCurriculum.html), First Steps to Success (Walker 1998; Walker et al. 1998), Early Risers-Skills for Success (August et al. 2001), and Adolescent Transitions Program (Andrews et al. 1995; Dishion and Kavanagh 2002). Research-supported interventions for treating DBDs include Incredible Years (www.incredibleyears.com),

Helping the Noncompliant Child (Forehand and Long 2010; McMahon and Forehand 2003), Parent-Child Interaction Therapy (Eyberg and Calzada 1998), Parent Management Training (Forgatch and DeGarmo 1999; Forgatch and Rains, 1997; Forgatch et al. 2005), Brief Strategic Family Therapy (www.bsft.org), Problem-Solving Skills Training (www.yale.edu/childconductclinic/), Coping Power (www.bama.ua.edu~/lochman/index2.htm), Mentoring (www.mentoring.org; www.bbbsa.org), Multisystemic Therapy (Henggeler and Schoenwald, 1998; Henggeler et al. 1998; Schoenwald 1998; www.mstservices.com), Functional Family Therapy (www.fftinc.com), and Multidimensional Treatment Foster Care (www.mtfc.com). An overview of the outcome studies for all of these interventions for DBDs is provided in the module, *How to Use the EBP Kits* (pp. 6–8).

This kit starts with a module, *characteristics and needs of children with DBDs and their families*, which looks at risk factors, protective factors, behavioral manifestations, DSM diagnostic criteria, co-occurring conditions, and the course of the disorders. Risk factors include poverty, harsh and inconsistent parenting, drug and alcohol use by caregivers, emotional, physical, or sexual abuse, neglect, modeling of aggression, media violence, negative attitude toward school, death or divorce in family, and parent criminality. Protective factors, on the other hand, include high IQ, being female, a positive social orientation, supportive relationship with parents, parental supervision, extracurricular activities, encouraging teachers, and having friends who behave well and disapprove of violence. Behavioral symptoms are varied and depend on the child's developmental stage. Co-occurring conditions include attention deficit/hyperactivity and trauma symptoms in younger children, anxiety and depressive symptoms in school-aged children, and substance abuse in early adolescents.

The kit offers a detailed six-step decision making process for analyzing the supportive research, and selecting the evidence-based intervention that will best meet the needs of your community, agency, families, and youth. Another module, *Interventions for DBDs*, offers a description of each of the evidence-based prevention models and interventions, including background and characteristics, research base and outcomes, implementation, financing, training, evaluation, and resources and references.

The module, *implementation considerations*, considers issues related to building support, funding, developing policies and procedures, training, cultural competence, and evaluation. With regard to evaluation, this same module offers a list of measurement instruments that can be used to assess child and family outcomes (see table on p. 17). A final module, *Medication Management*, offers guidance and information regarding the use of medication in the treatment of DBDs. The most widely used medications for DBDs are atypical antipsychotics (used to treat aggressive behaviors often associated with DBDs), and mood stabilizers and alpha agonists (both used to decrease levels of aggression and impulsivity).

Conclusion

The SAMHSA EBP kits are free and available to all social work faculty, practitioners, and students, and are full of useful information for the development and implementation of research-supported treatments. It would be a service to our social work students to introduce them to these valuable resources that can be utilized when they graduate and enter their chosen area of social work practice. These comprehensive packages could be used as either the centerpiece or as useful adjunctive resources for social work practice education in the fields of mental health and substance abuse. Each is based on many years of research and each has been effectively used with clients of diverse races, ethnicities and backgrounds. Structuring portions of social work education around these toolkits would be one way of promoting a more evidence-based and research-supported curriculum content, as is mandated by our professional code of ethics and accreditation standards. Hopefully, SAMHSA will continue developing additional kits in the future that will cover other areas where research-supported treatment programs are either available now or will be in the future.

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Conclusion

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E-therapy has many positive attributes to offer the social work field. Utilizing e-therapy in treatment settings can allow for more clients to be served at a lower cost. There is a large gap in services with many populations due to factors such as transportation, stigma, cost, and provider availability. Data from the National Survey on Drug Use and Health estimated that in 2006 approximately 24 million individuals were in need of substance abuse treatment. Out of that 24 million, only 10 % actually sought and received treatment (Substance Abuse and Mental Health Services Administration 2007). Practitioners and mental health professionals need to find ways to reach those individuals who are slipping through the cracks of our current treatment system. The use of e-therapy can aid in bridging those gaps of service and can significantly increase the availability of substance abuse and mental health treatment services. Many clients who have utilized e-therapy have had positive experiences. An informal study conducted by Metanoia found that 90 % of e-therapy users felt that e-therapy had helped them, and many of those participants also stated that they would not have initially sought face-to-face therapy (Alleman 2002).

E-Therapy vs. Traditional Face-to-Face Treatment

Benefits

As explained throughout the previous chapters, e-therapy has an array of benefits. One of the most significant benefits is the fact that e-therapy can reach those clients who may otherwise be unreachable. Treatment would be more accessible to individuals living in rural areas or without adequate transportation. E-therapy can also be utilized if clients move or travel frequently and are unable to meet with a therapist face-to-face. E-therapy would allow these clients to maintain continuity of care and not have a disruption in treatment.

E-therapy also costs relatively low. Many people already pay for Internet and phone services and could utilize the technology resources they currently have access to. E-therapy programs have been shown to cost significantly less than face-to-face consultations. The RodeoNet telepsychiatry program in Oregon reported that e-therapy services cost 50 % less than traditional therapy services (Brown 1998).

The lack of Internet access was once considered a barrier to implementing e-therapy. However, current research shows that Internet access is widespread across the USA. In 2013, 85 % of people in North America had access to the Internet. That is a 178 % increase from 2000 (Internet World Stats 2014). Utilization of technology has the potential to reach those individuals who do not seek care due to the current stigma associated with mental health and substance abuse disorders. There is a level of anonymity that one feels when utilizing technology such as e-mail, blogs, social media, and text messages. A client is able to communicate with peers and therapists in a more candid manner.

Further Considerations

One of the challenges of implementing e-therapy is that most practitioners have little to no training on the subject (SAMHSA 2009). E-therapy would be a valuable addition to coursework in undergraduate and graduate programs. According to a study conducted by Simms, Gibson, and O'Donnell (2011), only 28 % of mental health workers had received training on e-therapy techniques.

Confidentiality concerns are on top of a list of components needing further exploration. It can be difficult to maintain confidentiality via the Internet. Communication via the Internet is easily traced and shared and can be done so without the consent of the therapist or client. It is of utmost importance that e-therapy be conducted over a secure Internet connection. The National Association of Social Workers Code of Ethics states "Social workers who provide services via electronic media (such as computer, telephone, radio, and television) should inform recipients of the limitations and risks associated with such services" (NASW 2008). This is the only place in the code of ethics where e-therapy is referenced. Further research needs to be conducted on ways to better enhance the security of e-therapy practices, and that research needs to be incorporated into existing practice standards such as the NASW Code of Ethics. Several organizations, including the American Counseling Association, the American Psychological Association, and the National Board of Certified Counselors, have already revised their ethical codes to reflect the technological changes in the field of mental health and substance abuse treatment (SAMHSA 2009).

It is also argued that e-therapy will virtually erase the face-to-face interaction between client and therapist, which could lead to a loss of personal interaction that can be very important in a therapist–client relationship. E-therapy is not meant to completely replace face-to-face interactions but to instead enhance the treatment experience and hopefully reach those individuals who are unable to access face-to-face treatment. Many treatment programs utilize a combination of online resources along with face-to-face meetings with clinicians. It is recommended that practitioners meet with clients in person before implementing e-therapy. This will help alleviate some malpractice issues and can help avoid misdiagnoses (SAMHSA 2009).

Model Programs The Substance Abuse and Mental Health Services Administration (SAMHSA) (2009) has identified several e-therapy model programs via the *Screening, Brief Intervention, Referral, and Treatment College and University Grantees*:

University of Massachusetts at Amherst's "Enhancing Services for College Students Using BASICS for High-Risk Drinkers."

University of Tennessee's "Using Computers to Screen and Provide Brief Interventions for Underage Alcohol/Substance Abuse on College Campuses." (Described further in Chap. 3).

University of Hartford's Project OASIS (Outreach and Action for Students Improvement Services).

New Mexico Highlands University in collaboration with the Sangre de Cristo Community Health Partnership to provide screening, brief intervention, and referral to treatment (SBIRT) services to freshmen, athletes, and students referred by student services personnel, residence hall assistants, and campus security.

University at Albany, State University of New York expands its capacity to provide screening and brief intervention to high-risk drinkers and creates an environment that supports reduced drinking rates and increased health behaviors.

Electronic Treatment Interventions SAMHSA (2009) has also provided a list of evidence-based e-therapy interventions including**:**

e-CHUG (http://www.e-toke.com/info/?p=home.php)

e-TOKE (http://www.e-toke.com/info/?home.php)

Native Telehealth Outreach and Technical Assistance Program (http://aianp. uchsc.edu/cnatt/cnatt_index.htm)

eGetgoing.com-Online Treatment for Adults (http://www.egetgoing.com/addiction_treatment/online_addiction_treatment.asp)

teenGetgoing.com-Online Treatment for Adolescents (https://www.teengetgoing.com/index.asp)

The Woman's Heart (http://www.thewomansheart.org)

Amigos (http://edweb.sdsu.edu/people/cguanipa/amigos/index.html)

Student Bodies (http://bml.stanford.edu/multimedia_lab/)

Bosom Buddies (http://bml.stanford.edu/multimedia_lab/)

Northern Arizona Regional Behavioral Health Authority (http://www.narbha. org/for-providers/telemedicine/)

The Appal-Link Network (http://www.cmcsb.com/Appal.htm)

Eastern Montana Telemedicine Network (http://www.emtn.org)

Conclusion

E-therapy opens the field of psychotherapy to clients who may not otherwise seek treatment. While further research needs to be conducted to properly evaluate the effectiveness of e-therapy programs in mental health and substance abuse treatment, the current research looks very promising. E-therapy is constantly evolving and changing, and mental health practitioners can look forward to future developments that will enhance service delivery to clients.

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